The Lumleian Lectures

ON

SOME PROBLEMS IN CONNEXION WITH APHASIA AND OTHER SPEECH DEFECTS.

Delivered before the Royal College of Physicians of London, on April 1st, 6th, and 8th, 1897,

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LECTURE II.[1]

Delivered on April 6th, 1897.

MR. PRESIDENT AND GENTLEMEN,—After the full discussion of physiological first principles in the last lecture, I now propose to limit myself to a consideration of certain parts only of the very extensive subject of speech defects, and I have selected those parts which are of most general interest and that have hitherto given rise to most discussion. I shall not deal at all with defects dependent upon lesions beneath the cortex—that is, neither with anarthria nor with aphemia; nor shall I consider, except incidentally, the effects of lesions of the commissures between the different word-centres. I shall confine my attention to the effects of lesions of the four word-centres themselves, both separately and in combination. And when I say lesions I mean for the most part gross lesions, for time would not permit of my dealing with the many varieties of aphasia due to transitory lesions or functional disabilities in Broca's region. And even when thus narrowing the subjects to be dealt with in this and the next lecture, I find myself over-burdened with matter—partly because of discordant views that must be discussed, and partly because in the present state of knowledge and opinion concerning these speech defects it would be impossible for me to attempt to substantiate my own opinions without quoting a number of cases the full details of which the time at my disposal will not permit me to read.

STRUCTURAL DEFECTS IN THE GLOSSO-KINÆSTHETIC AND CHEIRO-KINÆSTHETIC CENTRES.

These kinæsthetic centres are, as I have already observed, concerned more with the expression of thought than with the thinking process. Their activity is in the main roused as thought is about to translate itself into action. These centres form the last outposts on the side of ingoing currents, and constitute at the same time the starting points for outgoing currents. They are situated at what psychologists have spoken of as "the head of the stream." Although with lesions limited to these regions the power of thinking may not be very greatly interfered with, still it is nearly always interfered with to some extent, so that patients having such lesions do not usually exhibit anything like the same amount of mental clearness as that shown by patients suffering from aphemia. It is true that the latter very frequently preserve their power of communicating their thoughts by writing, whilst aphasic patients do so only rarely. Any mental disability in the latter would therefore tend to appear greater than it really is. But this only very partially explains the apparent difference in mental power that is commonly met with. The fact that speech and writing are so frequently involved together in typical cases of aphasia is due partly to the proximity of the glosso- and the cheiro-kinæsthetic centres, and, as we shall subsequently see, perhaps not less to the proximity of the two sets of commissural fibres connecting these centres with the auditory and the visual word-centres respectively. Damage to these commissures may, in fact, be a cause of typical cases of aphasia and of agraphia, as I shall subsequently endeavour to show.

These modes of accounting for the co-existence of agraphia with aphasia undoubtedly hold good for certain cases, and especially for those in which, while there is no paralysis of the right hand and arm, the agraphia is complete—copying (except laboriously and slowly) being no more possible than writing spontaneously or from dictation. The destruction either of the cheiro-kinæsthetic centre or of the commissure connecting it with the visual word-centre ought to produce such decided results as this. On the other hand, if no other disturbing cause were in operation, there is no reason why such a patient should not be able to write well with separate wooden letters (*écriture typographique*) either spontaneously or from dictation. And in cases where such a patient is paralysed in the right hand there would be no reason why he should not, with practice, become able to write in all modes with his left hand.

Whether the combination of aphasia and agraphia is mostly due, as I think, to this simultaneous implication or functional derangement of the cheiro-kinæsthetic centre and the commissure uniting it with the visual word-centre or to some other cause must for the present be regarded as a moot point. Formerly a different view was taken. Thus some of the earlier observers of aphasic cases, such as Trousseau, Hughlings Jackson, and Gairdner, seemed to consider that the inability to write was as much a result of a lesion in Broca's centre as inability to speak, and contended, indeed, that there was almost always a parity between these defects. Trousseau,[2] for instance, says: "The inability to write is proportionate to the inability to speak"; and again: "Aphasics write as badly as they speak, and those who do not speak at all are absolutely incapable of writing." Gairdner expresses himself in almost similar terms. Hughlings Jackson is even more decided in his opinion. Thus he says[3]: "If a patient does not talk because his brain is diseased, he cannot write (express himself in writing). ..... I submit that the facts that the patients do not talk, and do write and do swallow, are enough to show that there is no disease at all."

One of the first to dwell upon the marked inequality that may be met with between these two disabilities was W. Ogle,[4] to whom we owe the introduction of the term "agraphia." More than ten years previously, however, Marcé[5] had insisted upon the independence of these two defects. Thus, speaking of inability to write, he said: "It is independent of the faculty of expression [by speech], since twice the patients could write freely when they were quite unable to speak. It is independent of the motility of the hand, since even when the hand has preserved all its power writing has been found to be impossible."

The dependence of ability to write upon the integrity of a cortical centre altogether distinct from that by which articulate speech is effected is, I think, practically certain, but this is but another aspect of the question previously put, and will have to be considered more fully a little later. For the present it is assumed that there are two such separate but contiguous centres; and if this be true, that they are frequently affected simultaneously (either structurally or functionally) in cases of aphasia may be fully recognised. Still in some cases either the glosso-kinæsthetic or the cheiro-kinæsthetic centre seems to be in the main involved, so that in one case speech may be principally interfered with, while in another it is more especially writing that is made difficult or impossible. This latter kind of defect is much less frequent, and usually less noticeable, than the former, because the patient is also often more or less paralysed in the right hand and arm. In such cases attempts at writing would only be possible, if at all, where the left hand and the right side of the brain have been more or less educated, and frequently no serious attempts have been made in this direction.

Though aphasic patients are unable to give voluntary and preconsidered expression to their thoughts; words, or even short phrases and oaths, may occasionally be uttered under the influence of strong emotion. We often find these patients able to make use of short familiar words like "yes" or "no" in response to questions addressed to them, though they may be often inappropriately employed. The articulation of such words, or "recurring utterances" as they are now commonly termed, is generally supposed to be brought about through the intervention of the comparatively uneducated right third frontal convolution, and this subject will be referred to more fully later. As Hughlings Jackson originally pointed out, such a patient is quite unable to repeat one of these words which he is continually bringing out, or, indeed, any other simple vowel sound, when he is asked to do so. He cannot utter it, that is, in a purely voluntary manner, in response to a request or command. Another interesting

[1] Lecture I. was published in THE LANCET of April 3rd, 1897.

[2] Lectures (Translation by Bazire), 1866, p. 261.

[3] Brain, vol. i., 1878, pp. 320 and 329.

[4] St. George's Hospital Reports, vol. ii., 1867.

[5] Mémoires de la Société de Biologie, 1856.

peculiarity is also often seen when resident foreigners become aphasic. During recovery it is found that they are at first only able to express themselves in that language in which they are most thoroughly versed—namely, in their own native tongue. I have seen this in several patients. Two were Germans who had been long resident in this country; yet after an attack of right hemiplegia and aphasia each of them was for a long time unable to utter a word of English. When they began to speak they used German words only; and after they had further recovered, if occasionally in want of a word while speaking English, it was always a German equivalent that first presented itself.

There are many instances on record in which, though the aphasic condition itself has been complete and associated with more or less agraphia, the mental powers of the patients have been fairly well preserved. Many of such individuals have been able to read intelligently to themselves, and play games, like draughts or cribbage, perhaps better than their neighbours.

The powers of articulation and of speech remaining to aphasic patients are very various, but may generally be ranged under one or other of the following heads: (*a*) Cannot utter a sound, or only mutters inarticulately; (*b*) constantly repeats some meaningless sound or sounds such as "tan-tan" or "cousisi"; (*c*) uses some one or two single words such as "yes" and "no,"; and also mere sounds such as "ba-ba" or "poi-boi-ba"; (*d*) uses some short phrase habitually, such as "list complete," or "I want protection"; and (*e*) uses three or four words or expressions, though in themselves meaningless or irrelevant, in a constant and definite manner, as in Broca's case (Lelong), in which the words "oui," "non," "trois," and "toujours" were so employed.

An examination of the recorded cases in which aphasia has been produced by lesions more or less completely localised to Broca's region, or to it and the foot of the second frontal convolution (the supposed seat of the centre for writing), by no means suffices, as some suppose to establish the view that agraphia is to be regarded as one of the effects of a lesion in the foot of the left third frontal gyrus. It will rather be seen, on the whole, to lend considerable support to the opposite notion that co-existing agraphia in such cases is to be regarded as a result of a coincident damage to, or functional perturbation in, the foot of the contiguous second frontal convolution. The evidence afforded by such cases, however, is much less conclusive than it should be, owing to the fact that in so few of them have careful observations been made as to the ability of the patient to write some days after the occurrence of the lesion, when the mere perturbation of brain functions that it may have caused has had time to subside.

Of the first two cases of aphasia that were recorded by Broca,[6] in one the lesion was old and widespread, though the left third frontal convolution was one of the parts that were destroyed; in the other the lesion was limited to the posterior parts of the left third and second frontal convolutions, and there was as a consequence loss of speech and writing, without any paralysis of limbs. This was, therefore, altogether the most memorable case, since by means of it more especially the first attempt was made to limit the situation of the region in the left frontal lobe damage to which gave rise to aphasia. The following is an abstract of this classical case:—

CASE 1.—Lelong, aged eighty-four years, was admitted into the surgical ward of the Bicêtre, Oct. 27, 1861, under the care of Broca. In the month of April, 1840, he had had a slight apoplectic attack, from which in a few days he was convalescent, no paralysis of limbs having been observed, though his speech was lost except for four or five words. His intelligence seemed unimpaired. He understood all that was said to him; and apart from his very scanty vocabulary he made use of expressive gestures. He remained in much the same condition for eighteen months, that is up to the time of his coming under Broca's care. To his questions he only replied by signs, accompanied by one or two syllables pronounced hastily and with visible effort. Broca says:—"These syllables had a meaning. They were French words, viz., *oui*, *non*, *tois* (for *trois*), and *toujours*. He had a fifth word, which he pronounced when one asked his name. He then replied, 'Lelo' for Lelong, his real name. . . . The first three words of his vocabulary corresponded each to a definite idea. In affirming or approving he said 'oui.' In expressing the opposite idea he said 'non.' The word 'tois' expressed all numbers, all numerical ideas. And lastly, whenever these three words were not applicable Lelong helped himself with the word 'toujours,' which in consequence had no definite meaning. I asked him if he knew how to write 'oui'; if he could do it. 'Non.' 'Try.' He tried, but he could not succeed in directing the pen." Broca gives details of his conversations with Lelong in illustration of these points. His sight and hearing were good. The tongue was protruded straight and was moveable in all directions. There was no paralysis of the limbs. This patient died twelve days after his admission, and at the necropsy the remains of an old hæmorrhage was found in the form of a small cavity filled with serum, and having its walls infiltrated with altered blood pigment, occupying the posterior third of the second and third frontal convolutions. This was evidently the lesion which occurred when he suddenly lost his speech about twelve months previously, as other parts of the brain showed no focal lesion of any kind.

[6] Bulletin de la Société Anatomique, 1861.

Tamburini and Marchi[7] have also recorded a case of destruction of the second and third left frontal convolutions which was associated during life with aphasia and agraphia.

Another case has been recorded by Simon[8] in which there was a traumatism affecting these same convolutions.

CASE 2.—A perfectly healthy man fell from his horse. He got up at once, took hold of the bridle, and was about to vault into the saddle, when a physician, who by chance accompanied him, approached and examined him. He was unable to speak, but made himself understood by signs. No paralysis whatever was present. On the head there was a small wound with depression of the bone. Later, when death ensued from meningitis purulenta and inflammatory softening of the brain, a bit of bone that had been broken off was found in the left third frontal convolution which, together with the second and the island, was softened. In the skull there was only a perfectly round hole, no crack or fracture in any part.

Nothing is said here as to the presence of agraphia, but it would probably have manifested itself as soon as the inflammatory softening caused by the original traumatism had extended so as to involve the posterior part of the second frontal convolution. Probably the condition of the patient, however, was too serious to permit of this being tested.

A case has been recorded by Rosenstein[9] in which it is said that a hæmorrhagic softening involving the third frontal convolution only gave rise to both aphasia and agraphia.

CASE 3.—A woman, aged twenty-two years, was admitted into hospital suffering from a fever of intermittent type, and from nephritis. She was ill for several months, and whilst recovering from this affection she was suddenly seized with severe cerebral symptoms. The countenance was pale, the expression staring, the pupils dilated. She understood what was said to her, and put out the tongue when asked. She took a drinking-glass when it was offered to her. She tried to answer, but in reply to questions could only say "Ja, Ja." She nodded approvingly when one guessed what her wishes were. She had formerly been able to write well, but now when requested to do so she only made all sorts of scrawls, but no letters. She lived sixteen days longer without the aphasia disappearing, and then died from a thoracic complication. At the necropsy a clot the size of a hazel-nut was found in the third frontal convolution, surrounded by a limited area of secondary softening. The precise site of the clot in the third frontal convolution is not stated.

In regard to this case it may be fairly said that the sudden irruption of a clot of blood of the size of a hazel-nut into the third frontal convolution may well have inhibited for a time the functions of the immediately adjacent portion of the second frontal convolution, and it is also by no means clear that the secondary softening may not have slightly extended into this part.[10] It will be of interest here, also, to quote a case of combined aphasia and agraphia in association with right hemiplegia, and therefore presumably the result of a much larger lesion. It is one of the cases recorded by Trousseau,[11] but in which there was no necropsy. The patient was, as is very often the case in true agraphia, able to write his own name, though nothing else. Trousseau says:—

CASE 4.—"In August, 1863, a lady came to consult me with her son, aged twenty-five years. Four years previously this young man had for several days complained of headache, when he suddenly called out to his mother one morning, 'Oh! I feel something extraordinary inside me.' These were the last words he spoke. His right arm and leg became numb, and after a few hours the hemiplegia was complete. After a short period he regained some power of moving first his leg and then his arm; but when he came to me he still walked with difficulty, and could only use his hand for very rough purposes. The aphasia, however, which had from the first day been complete, had not diminished. He could articulate two words only—'No' and 'Mamma.' 'What's your name?' 'Mamma.' 'What's your age?' 'Mamma, No.' He yet knew that he did not answer as he ought. He had taught himself to write with the left hand, but had not got beyond signing his own name, Henri Guénier. He wrote it very legibly on a piece of paper which I gave him. 'Since you write your name,' I then told him, 'say Guénier.' He made an effort, and said 'Mamma.' 'Say Henri.' He replied, 'No, Mamma.' 'Well, write Mamma.' He wrote 'Guénier.' 'Write No.' He wrote again 'Guénier.' However much I pressed him I could obtain nothing more. His mother informed me that he could play a pretty good game of cards or dominoes."

[7] Rivista Sperimentale di Freniatria et di Medicina Legale, 1883, anno ix., p. 282.

[8] Quoted by Kussmaul, Ziemssen's Cyclopædia, vol. xiv., p. 735.

[9] Berliner Klinische Wochenschrift, 1868, p. 182.

[10] A case of aphasia in a boy five years old, resulting from a traumatic lesion limited to the third frontal convolution, has been recorded by Duval, and is cited by Bateman (On Aphasia, second edition, 1890, p. 196).

[11] Loc. cit., p. 237.

Here we do not know the extent of the lesion. In such a case, however, it would have been immaterial whether the second frontal was involved in the lesion or not, because, as I shall subsequently show, destruction of this centre together with Broca's centre would not prevent a patient learning to write with his left hand, provided the left auditory and visual word-centres were not damaged at the same time. No sufficient details are given by Trousseau to enable us to decide whether the visual word-centre was or was not affected. It certainly may have been, judging from the fact that this young man had been unable to do more than learn to write his own name during the four years that had elapsed since the commencement of his illness—this being generally the extent of the achievement in this direction of patients who are agraphic by reason of a defect in the visual word-centre. Although this case, therefore, may have influenced the opinion of Trousseau, the modern development of knowledge enables us to say that it furnishes no evidence in elucidation of the question whether or not agraphia as well as aphasia is a necessary result of a lesion limited to the left third frontal convolution. I say this with all the more confidence because W. Ogle has recorded a case in which there was right hemiplegia and aphasia, though the patient could write with the left hand, and at his death the second left frontal convolution was found to be intact.[12] The essential details in this case are these :—

CASE 5.—A man, who had suffered from rheumatism and was the subject of aortic and mitral disease, had three days before admission to hospital fallen down, without loss of consciousness, and had found himself hemiplegic and aphasic. On examination, his speech was found to be limited to the two words "yes" and "no." At first he had difficulty in deglutition and in putting out his tongue, but these symptoms passed away in a few days. He understood all that was said to him, and expressed himself well by pantomime. In regard to his writing W. Ogle gives us the following information: "He could write with his left hand with sufficient distinctness words which he could not pronounce when asked to do so. In his writing there was often a tendency to reduplication of letters. For instance, he wrote 'Testatament' for Testament. But I cannot say whether this was more than the result of defective education." The necropsy showed the brain to be healthy, except at two limited spots, of which the chief was the posterior part of the third frontal convolution on the left side. Here was a softened and almost diffluent patch, about three-quarters of an inch in breadth, reaching from the highest part of the third convolution backwards and downwards to the fissure of Sylvius. The softened part was not actually the most posterior part of the convolution, for there was a narrow unsoftened strip between it and the transverse (ascending) frontal convolution. On cutting into the brain a second small patch of softening was seen in the centre of the left hemisphere, external to and rather above the corpus striatum, and extending towards the posterior extremity of the fissure of Sylvius.

Here, then, where we have the third left frontal affected whilst the second frontal convolution was proved to be healthy, there was aphasia, but no agraphia; and we may, perhaps, assume that a similar exemption from disease of the second frontal convolution existed in a case of my own in which there was a similar combination of symptoms.

CASE 6.—An active and intelligent man, a builder by trade, had an apoplectic attack associated with convulsions, which left him paralysed on the right side and quite speechless at first. His mind was also much confused for a time, but after two or three weeks he became able to understand what was said to him. The only articulate sounds he was able to utter for the first nine or ten months were "bi-bi-bi," "poy-boy-ba," and "no." After fifteen months he became able to say both "yes" and "no" appropriately; though whilst he continued under my care I never heard him utter any other articulate sounds than those above cited, and according to the statements of his wife this was the extent of his vocabulary. He had regained almost the complete use of his right leg, though the hand and arm still continued very powerless. He had practised writing with his left hand, and wrote fairly well with it. He was asked to write a letter to me, and the next time I saw him he gave me a note of which the following is a literal copy:—

"Jany. 5, 1869.

"Sir,—I am extremely obliged to you for the trouble you have taken about my affairs. You did not say thether *(sic)* you hav recovered from the severe cold and cough that you told me you were suffering from. I sincerely hope that you have quite recovered your health and strength.

"I am,

"———."

This note was written, his wife informed me, in less than half an hour, and without any assistance. Yet since his attack this same patient had only been able to utter the two or three words and sounds above mentioned. He seemed to understand everything that was said to him, and appeared also to understand the newspaper equally well when he read it, which he did habitually. When told to count twenty by tapping on the table with the forefinger of the left hand, he did it rapidly and always correctly. . . He could add quite correctly columns containing five figures when the numbers were low, but often got puzzled and made mistakes when the numbers were higher. According to his wife's statement he had been much more irritable than he was before his illness. He had several epileptiform attacks after the one with which his illness commenced, and on each occasion the convulsions were almost limited to the right side of the body.

In each of these cases, even where there has been no agraphia, there has been a more or less distinct lowering of mental power, as compared with that which occurs in the class of cases due to subcortical lesions which I include under the term "complete aphemia." For this there are two causes. First, there is the fact that in these cases of aphasia the brain may have been more considerably and widely damaged by the various structural lesions that have occurred than has been the case in the aphemic group of cases. Secondly, there is the fact that in the cases of aphasia one kind of word-memory is blotted out, whilst in aphemia none of the forms of word-memory are interfered with. Although the kinæsthetic memory of words is, as I have previously said, much less important for the carrying on of thought processes than the revivals which occur in the auditory and in the visual word-centres, still the destruction of the glosso-kinæsthetic centre may interfere with the functional activity of the other two centres. And this interference with the customary completeness of the processes of association concerned with thought and speech might be expected to lead to more or less of mental deterioration.

The degree to which this interference with thought occurs may, however, in an uncomplicated case of disease limited to Broca's region be extremely slight—almost inappreciable in fact—and moreover associated with no impairment in the power of writing. A very remarkable case of this type has been recorded by Guido Banti[13] which will well repay the most careful attention, because it speaks most authoritatively against the views of Trousseau and the other writers already referred to who have taught that agraphia, as much as aphasia is a result to be expected from an isolated destruction of Broca's region.

CASE 7.—A right-handed man, aged thirty-six years, who was able to read and write correctly, had a sudden apoplectic attack in 1877. Recovering consciousness in a few minutes he was found to be suffering from right hemiplegia and loss of speech. The paralysis of the limbs disappeared almost completely during the following night, though the inability to speak persisted. The next day he was admitted into hospital, and on most careful examination his condition was found by Guido Banti to be as follows:—"The motility of the limbs on the right side had returned to their normal condition. There was no trace of paralysis of the face or of the tongue. The patient made ineffectual attempts to speak; *he could not articulate a single word*, not even isolated syllables. He was much affected by this mutism, and sought to make himself understood by gestures. I asked him if he knew how to write, and after he had made a gesture in the affirmative I gave him what was necessary and told him to write his name, which he did immediately. I put various other questions to him, to which he replied similarly by writing. I told him to give me a description of his illness, and *he wrote without hesitation* the details above reported. I showed him various objects, pieces of money, &c., telling him to write their names, and he did so without making any mistakes. Then instead of giving him these directions by word of mouth, I wrote them for him in order to thoroughly convince myself that he was able to understand writing. He replied to these questions with perfect correctness. He always wrote very rapidly and did not seem to hesitate to choose his words. He made no mistakes in syntax or orthography. He could understand equally well ordinary writing and print, and when one spoke to him he grasped at once the meaning of the questions, and never wished to have them repeated. I next wrote some most simple words, such as 'pain,' 'vin,' &c., and urged him ineffectually to read them aloud. I then pronounced myself some of the words, directing him to repeat them. He appeared to watch with great attention the movements of my lips whilst I spoke; he made some ineffectual efforts to obey, but he never succeeded in pronouncing a single word." This patient died in February, 1882, from an aneurysm of the aorta; and a patch of yellow softening was found situated in the posterior third of the third left frontal convolution, and extending for some millimetres only into the white substance.

Here, then, we have a patient with a lesion destroying, but limited to, Broca's region, in whom there was loss of speech but no trace of agraphia, the patient being able to write well with his right hand. It is also of importance to note that there was here no more mental impairment than is found to exist where speechlessness is due to a sub-cortical or a bulbar lesion—that is, in a case of aphemia or of anarthria. But for the result of the necropsy I should have regarded this case as one of complete aphemia. It shows, therefore, that there may be no clinical differences present to enable us to make this differential diagnosis, even though in the one case we have destruction of Broca's region, and consequently no kinæsthetic revivals of words possible, while in the other this kind of word memory is in no way interfered with, and there is also less chance that the lesion would lead to any interference with the functions of the auditory and the visual word-centres. For another very interesting case of aphasia in some respects similar to the last I am indebted to the kindness of Dr. Dickinson.

[12] Loc. cit., p. 105.

[13] Afasia e sue Forme, Lo Sperimentale, 1896, lvii., Obs. II., p. 270; and quoted by Prévost in the Revue Medicale de la Suisse Romande, June 30, 1895.

CASE 8.—A sailor, aged forty-nine years, was admitted to St. George's Hospital under Dr. Dickinson's care, having had a fit in a neighbouring public-house. He had landed a few days before, and had been robbed in some place of resort for sailors, and had been much disturbed in mind in consequence. One and a half hours after admission he had recovered consciousness and intelligence, but not his speech. He could not say anything intelligibly except the word "no," but the remarkable fact about his case was that he could express himself perfectly in writing, which he did with his left hand. He was hemiplegic on the right side, the right arm being completely powerless, the right leg partially so; there was also slight loss of sensibility over the whole of the right side of the body. For three weeks his speech was limited to the use of the word "no," a sound like "yong" which stood for "wrong," and the frequent recetition of the syllables "yah yah," which stood for everything. Told to repeat a sentence or phrase, "Great Britain and Ireland" or any other, he uttered the same "yah yah yah" for either. But he could express himself in writing as fluently and correctly as if his faculty of spoken language were uninjured. He wrote daily reports and an autobiography during the time that he was unable to speak. He understood perfectly all that was said to him. He retained his sense of music, and could whistle "God Save the Queen." On the twenty-fourth day after the seizure it was evident that his speech was improved, he could say "doctor" and "better." In the evening his full power of speech was rather suddenly restored. The limbs recovered more gradually, the leg sooner than the arm. He left the hospital six weeks after admission, able to walk, but not to lift his right arm. Dr. Dickinson adds:—"The perfect ease and fluency with which the man wrote with his left hand showed that he had been in the habit of doing so. He was in common phrase left-handed, though he said he was not to be called so, since he used both hands equally."

Though in many respects different from the case previously recorded, this resembles it in the fact that we have to do with what certainly seems to be a simple case of aphasia without appreciable mental degradation and with the power of writing unimpaired. The case is also interesting since it constitutes an exception to the very general rule that left-handedness suffices to transfer the leading speech activity to the right side of the brain, and because of the further exceptional circumstance that being left-handed the patient had not been taught to write with his right hand. Another case that was recorded many years ago by Wadham[14] is in some respects even more remarkable, and all the more convincing because it was followed by a necropsy. It will be observed also that before death the patient had regained his power of speaking. The essential details are as follows:—

CASE 9.—A youth, aged eighteen, left-handed and ambi-dextrous, became partly hemiplegic on the left side and completely speechless after long exposure to cold, and was admitted to St. George's Hospital under the care of Dr. Wadham. Twelve days later, on being given a slate and pencil, he wrote readily the word "orange," and when asked his name also wrote that correctly with his right hand, although his mother asserted that she had never previously seen him do so. He and four of his brothers were left-handed. About a week after this, being still absolutely speechless, when asked whether he tried to speak and was unable he wrote "Yes." Asked if when well he wrote with his right or with his left hand, he wrote "Both," and then added, "Fight with left." In six weeks' time the left hemiplegia had much diminished, but he had still never spoken a word and continued to write all his wishes on a slate. His manner gave the impression of his "being very intelligent and rather facetious." At the expiration of three months he left the hospital, and when seen at his own home two weeks later Dr. Wadham says: "I found that at his mother's dictation he repeated after her various words and sentences with the intonation employed by one who endeavoured to speak without moving his tongue." This power was gradually increased until at last he was able to talk with sufficient distinctness to be perfectly understood by those accustomed to him. He subsequently suffered from necrosis of the jaw, and three months after his discharge was re-admitted to the hospital. After an operation on the jaw he became able to move his tongue naturally. His articulation subsequently was indistinct, but he "had no difficulty in producing words, and always used the right ones." He died twelve months after the onset of his illness. At the necropsy a large area of softening was found in the right hemisphere, involving part of the white substance beneath the Rolandic area, and completely destroying the island of Reil. The left hemisphere was found to be perfectly healthy.

It may be thought by some that these two cases have little bearing upon the question we have been considering. But this would be an erroneous impression. Certain authorities maintain, as I have said, that destruction of the third frontal convolution alone in the leading hemisphere for speech gives rise to agraphia as well as aphasia. They believe, for reasons that will be more fully specified presently, that destruction of Broca's centre hinders the revival of words also in the other word-centres, and thus prevents writing by stopping the process at its source. But in the cases of Ogle, of Gaido Banti, and of Wadham—and possibly in that of Dickinson—we see that the ability to think and write was not interfered with by such a lesion in the leading hemisphere for speech, and therefore that the activity of the corresponding auditory and visual word-centres was neither suppressed nor gravely interfered with.[15]

[14] St. George's Hospital Reports, vol. iv., 1868, p. 245.

[15] Dally (Ann. Med. Psychol., 1882, p. 252) mentions the case of another left handed man who had an apoplectic attack resulting in left hemiplegia and aphasia, who was not agraphic, though he wrote in a paragraphic fashion. Two years afterwards he had almost recovered from his hemiplegia, and he could write, speak, and read, though he was unable to spell properly. M. Mesnet mentioned also that he had formerly presented to the society a patient suffering from left hemiplegia and aphasia with preservation of ability to write.

The case reported by Wadham is further of special importance because it has been contended by Déjerine and also by Mirallié,[16] upon the basis of four cases (without necropsies) of aphasia with left hemiplegia occurring in left-handed persons, in whom the power of writing was lost simultaneously, that this loss is the rule and only what might be expected. The cases I have cited show, however, that it is not the rule, and leave us free to suppose that those of Bernheim, Parisot, Magnan, and Déjerine (where the power of writing was lost) were not cases of simple aphasia due to lesions in Broca's region only. The lesions in them may also have involved the visual word-centre in one or other hemisphere, or the commissure between them, and in either of these eventualities we might find an explanation of the co-existing agraphia.

In all the cases of left-handed persons in which the right hemisphere takes the lead in speech, whilst the left hemisphere executes the writing movements, it must be supposed that the right auditory word-centre is the initial centre for the revival of words either for silent thought or for speech, and therefore also for spontaneous writing. Thus in such a person we must assume that the left visual word-centre becomes educated concurrently during the process of learning to write (through the commissural fibres in the corpus callosum), and that the writing process is executed by this left side of the brain in the ordinary way by the passage of stimuli from the visual word-centre on to the corresponding cheiro-kinæsthetic centre.[17]

There is, therefore, no reason whatever why some, and perhaps the majority of, left-handed persons when they become the subjects of left hemiplegia and aphasia should not, after the shock attendant upon the brain lesion has passed, either be able to write at once as was the case with Dickinson's patient and with the ambi-dextrous patient of Wadham, or else speedily learn to do so. Where there is not this ability after a time, as in the case of Trousseau and one subsequently to be referred to which has been recorded by Déjerine, there would, as I have said, be fair ground for suspecting that the lesion was not confined to Broca's convolution, but was also associated with some damage to the visual word-centre either on the same or on the opposite side of the brain.

Returning from this partial digression concerning the mode in which writing is performed in some aphasic persons, it will be seen that the case of Guido Banti, as well as that of Dickinson and of Wadham, is absolutely opposed to the views of Stricker and Hughlings Jackson. They show that for mere thought, apart from its oral expression, the memorial recall of kinæsthetic impressions may be even less necessary than might have been supposed by those who do not share their views. These cases are equally opposed to the views of Déjerine, Wyllie, Mirallié and others, who, without looking upon this form of word memory as the most important of all, nevertheless think that glosso-kinæsthetic revivals are necessary for silent thought, and that without such a process as an initiative there is an inability to recollect words (amnesia verbalis), together with an inability to read and write.[18]

Déjerine seems to have been led to these views in the first place by adopting as does Wernicke, the opinion expressed by Trousseau, Jackson, and Gairdner that a lesion limited to Broca's region carries with it agraphia as well as aphasia, and that the two defects are almost always proportional to one another. The frequent co-existence and parity of the two defects cannot be denied, but this, as we have seen, may be due to the common simultaneous damage to the glosso- and the cheiro-kinæsthetic centres or to the commissures connecting these centres respectively with the auditory and the visual word-centres

[16] Loc. cit., p. 85.

[17] The process of learning to write here would, in fact, be the converse of what occurs when an ordinary right-handed person suffering from right hemiplegia and aphasia learns to write with the left hand. The only other possibility would seem to be that the incitation for writing should pass direct from the visual word centre in the leading speech hemisphere (though in a diagonal direction) to the centre for writing in the opposite hemisphere, which seems to me much less probable.

[18] Thus Wyllie, who follows Déjerine, goes so far as to say (loc. cit., p. 314): "There is reason to believe that in every case of severe motor aphasia that is due to destruction of the motor images amnesia verbalis is extremely well marked—even more so, perhaps, than it is in severe cases of auditory aphasia."

A careful examination of the cases capable of throwing light upon these two interpretations, to some of the best of which I have above referred, tells distinctly against the view, which has been adopted by Déjerine and others, that agraphia is to be regarded as one of the consequences of an isolated destruction of Broca's centre. The fact, however, of Déjerine adopting this view has led, I venture to think, to his attaching an altogether undue importance to destruction of Broca's region, since he not only believes that it interferes with silent thought by hindering the revival of auditory word images, but that it leads to some amount of alexia, and is likewise a cause of agraphia. It has also induced him to bring forth a variety of arguments tending, as he thinks, to disprove the existence of any cortical centre having the same relation to writing movements that Broca's centre has to speech movements. All these positions have, moreover, been recently maintained by his pupil Mirallié in a valuable and interesting work entitled "De l'Aphasie Sensorielle." It will be necessary, therefore, to look at these various opinions in succession, in order to see how far they are warranted by existing knowledge.

1. Does destruction of Broca's region alone entail amnesia verbalis?—To this question I am disposed to give a negative answer. I rely upon the reasons previously adduced to show that words are primarily revived in the auditory word-centre rather than in the glosso-kinæsthetic centre. I can also refer to the case of Guido Banti, as well as to those of Dickinson, Wadham, and others, seeing that the ability of these individuals to write clearly showed that they could recall words and were not suffering from amnesia verbalis. It is true that Lichtheim also agrees with Déjerine and Wyllie in regard to this question. Thus he says[19]: "I think that in most motor aphasics—in those, among others, of the true Broca's type—the patient has lost the auditory word-representations—that is to say, cannot awake them voluntarily by an action of their higher centres." The only safe criterion, he thinks, of the preservation of the auditory symbols in these cases would be obtained by the existence of an ability to write, or, in default of that, the ability to realise the correct number of syllables in any word that cannot be uttered, and to signify this number by giving so many hand-pressures. Both these powers are, he thinks, usually lost in patients suffering from motor aphasia. It has been shown, however, that this is not so in uncomplicated cases of destruction of Broca's region, since, as we have seen, the power of writing persists, and so doubtless would the other test of minor significance to which he refers. I am quite prepared to admit, however, that exceptions to this rule may be occasionally met with. The functional relations of the auditory word-centre with Broca's region on the one side and the visual word-centre on the other are so close that the destruction of either of these centres may be easily conceived to derange the functional activity of the others for a longer or a shorter time. The degree of this derangement may be considered to vary in different persons, perhaps in accordance with the relative potency, original or acquired, of the several centres. Thus in some persons an isolated destruction of Broca's region may disturb to a very slight extent the functional activity of the auditory and the visual word-centres, whilst in others it is quite possible that the severance of this centre from the other two may greatly alter their functional readiness, so that the spontaneous revival of the auditory and visual images of words may in such persons be more or less hindered, and as a consequence the power of thinking and of writing proportionately lowered.

2. Does destruction of Broca's region entail alexia?—I believe that, as a rule, in reading a proper comprehension of the meaning of the text requires a conjoint revival of the words in the visual and the auditory word-centres, but that for this mere comprehension it is not necessary for the stimulus to pass on also to the glosso-kinæsthetic centre, as it must do in reading aloud. It may, however, be freely admitted that if the way is open, and this latter centre is in a healthy condition, it does commonly receive in reading to one's self a slight stimulus from the auditory word-centre, a fact which is often enough shown by the occurrence of involuntary half-whispered mutterings when reading. It may also be admitted that the rousing of all three centres does give assistance in the comprehension of anything difficult, as is shown by the common practice of reading aloud any passage the meaning of which may be at all obscure. By this proceeding aid is obtained, however, not alone by the full rousing of the glosso-kinæsthetic centre, as there is also the full activity of the auditory word-centre following upon the spoken words. This kind of aid is, indeed, commonly needed, as Wernicke pointed out, by an uneducated person for the full comprehension of almost all that he reads. Therefore it may easily happen when such a person becomes aphasic from destruction of Broca's region that alexia may go with the aphasia.[20] Similar aid may be necessary in cases in which there is functional weakness of the visual word-centre. Thus there is now under my care in the National Hospital for the Paralysed and Epileptic a woman, apparently suffering from a tumour in the left hemisphere, who is hemiplegic on the right side and understands readily all that is said to her, but who does not seem to gather the meaning of the simplest written or printed request unless she reads it aloud, which she is able to do without hesitation. She is quite unable to write spontaneously or to copy with the left hand, but then she has made very few attempts in this direction since her right hand became paralysed.[21] It would seem, however, that in some persons the comprehension of writing or printing does not even require the associated activity of the auditory word-centre, so long as the visual word-centre is in a healthy condition and its other associational fibres are intact. This is proved by the fact that in a case recorded by Wernicke and Friedländer,[22] in which there was aphasia associated with word-deafness (due to a lesion in Broca's region and also in the upper temporal convolution), the patient was able to read well and even to write; there is also a valuable case of word-deafness (with lesions in both upper temporal convolutions) recorded by Mills, and to be quoted further on (Case 26), in which the patient was able to understand what she read; and a still more remarkable case recorded by Pick, with very similar lesions (Case 30), in which, although the patient was word-deaf, he could write and comprehend perfectly what he read.

Long before I was aware of the crucial evidence afforded by these cases and that of Guido Banti I did not believe that the comprehension of writing or of print was appreciably interfered with by an isolated destruction of Broca's region—that such a lesion, in fact, did not lead to alexia. For independently of the general views discountenancing such a notion there were Case 6 and two recorded cases by Broadbent, as well as others, pointing in the opposite direction. Some particulars concerning one of these cases recorded by Broadbent may well be reproduced here.[23]

CASE 10.—A man, aged twenty-nine years, was admitted to St. Mary's Hospital on April 3rd, 1870. He had had fits when a child, the last at the age of seven years; and rheumatic fever twelve months previously to his admission. He had not been well, and had left off work for two days. During these two days he talked incessantly all sorts of nonsense. In the night his brother awoke and found him in violent convulsions, mostly of the legs, not more on one side than on the other. The attack lasted two hours; when it was over right hemiplegia with loss of speech was established. On admission the paralysis was complete, the loss of speech absolute, and he could not protrude his tongue. He gradually gained some power in the leg so as to be able to walk about, but the arm remained motionless and flaccid. He could now also say "yes" and "no," but was not always right in his use of these words. On one occasion he twice said "Here" to his sister, when impatient that she had not complied with his wish for her to come to him. He could write his name, but nothing else; and wrote it when asked to write an answer to a simple question. Broadbent adds: "The case presented no unusual features, and is here recorded partly as an example of a rather unusual type of attack in embolism; partly for the purpose of noting that the patient while in the condition described read the newspapers much with apparent interest, and at my request he pointed out a Crystal Palace advertisement of fireworks and an account of pigeon shooting at Hurlingham, the latter very promptly and with a pleased expression, as if he had already read and enjoyed it."

Many of the cases in which there has been alexia co-existing with aphasia are I think clearly cases in which there have been rather wide lesions extending far beyond the third frontal convolution and involving also the visual word-centre. This is the interpretation that I attach to a celebrated case recorded by Trousseau, which evidently influenced his opinion very much. I allude to the wealthy patient whom he saw in consultation in the department of Landes.[24] On this point Trousseau says: "As he always answered 'Yes,'

[19] Loc. cit., p. 471.

[20] Kussmaul, loc. cit., p. 775.

[21] This patient died within a fortnight, when a tumour about two inches in diameter was found in the midst of the left centrum ovale, not extending into the cortex, but which may have caused some slight but undue pressure upon the left visual word-centre.

[22] Fortschritte der Medicin, No. 6, 1883.

[23] The other is recorded further on (Case 13) under the head of Agraphia.

[24] Lectures, Translation by Bazire, pp. 229-232.

I asked him whether he knew how that word was spelt, and on his nodding assent I took up a large quarto volume with the following title on its back, 'History of the Two Americas,' and requested him to point out the letters in those words which formed the word 'yes.' Although the letters were more than one-third of an inch in size, he could not succeed in doing as I wished. By telling him to seek for each letter in turn, and by calling out its name, he managed, after some hesitation, to point out the first two, and was very long in finding the third. I then asked him to point out the same letters again, without my calling them out first; but after looking at the book attentively for some time, he threw it away, with a look of annoyance which showed that he felt his inability to do as I wished him." Few, I think, would now suppose that we had to do here with a case in which there was no lesion about the posterior extremity of the Sylvian fissure as well as of the third frontal convolution.

Lichtheim is inclined to give much the same kind of interpretation to this class of cases. He points out that the examination of an old case is apt to be confusing in regard to its correct pathogenesis, owing to the fact that some of the defects originally existing have cleared up and disappeared. In this relation he calls attention [23] to the "usually rapid disappearance of word-deafness, and the greater persistence of the troubles connected with written language." He adds: "This fact appears to me to throw light upon a not unfrequent type which does not readily fall in with our classification; I mean that of motor aphasia in which alexia co-exists."

It is, of course, possible that this explanation by Lichtheim may hold good for certain cases, but that it is not necessary to have recourse to it in order to explain those cases of apparently simple aphasia with which alexia co-exists I have become convinced by two cases that have recently come under my observation. What we have to ask ourselves when in the presence of such cases is whether there is any evidence to show that the case is not one of simple aphasia, and whether a lesion exists also in the region of the posterior extremity of the Sylvian fissure. We may inquire, therefore, for the previous existence of word-deafness as Lichtheim suggests, and also examine the patient carefully for the present existence of some amount of hemianæsthesia. The finding of this latter would show two things: first, that the lesion was not limited to the third frontal convolution; and, secondly, that either it or a second lesion also existed not far away from the visual word-centre, which consequently may have been also involved. Since I resolved to apply this test two cases of aphasia combined with alexia have come under my care, and in both of them there was the co-existence of a more or less complete hemianæsthesia, as may be seen from the abstracts of these cases which I now give.

CASE 11.—A woman aged thirty-two years, was admitted into the National Hospital for the Paralysed and Epileptic under my care on May 19th, 1896. She had been married fifteen years, and had eight children. She had a loud, mitral regurgitant bruit; the pulse was small, and irregular in force and frequency. She had been in good health till Oct. 25th, 1895, when she had a fit with loss of consciousness lasting three hours. For two or three days afterwards she seemed quite dazed and did not know anyone. The fit was followed by loss of power in the right arm and leg and loss of sight in the left eye. She has regained some power in the right arm and leg, but is still blind in the left eye. Ophthalmoscopic examination shows simple white atrophy of the left optic disc with evidences of past embolism of some branches of the central artery of the retina. She is naturally right-handed. There is distinct, though slight, right hemiplegia, including the face, arm, and leg. She can walk with dragging of the right foot and perform all movements with the right leg and arm, though much less forcibly than with the left limbs. The tongue is protruded straightly. There is incomplete right hemianæsthesia; sensation is dulled to touch and pain to the mid-line of the face, head, and trunk (back and front), also over the arm, hand, and upper two-thirds of the thigh. She is almost completely speechless. She can answer "Yes," "No," and say "Yes, I know" in answer to questions. Once she said "Good night." Her articulation of these few words is good. She cannot speak voluntarily, and cannot repeat the simplest word when bidden. The patient understands more or less complex matters spoken to her, and performs some spoken commands, but is slow at it, and often makes mistakes. When told to show her tongue she generally shows her teeth. There is almost complete alexia. She cannot recognise words or letters as a rule, except short names of external objects, such as "pen," "lamp," "cat," "dog." She will, when shown the name, point to such objects in the ward or in pictures. She does not recognise the word "man," and she cannot understand simple written commands. When shown four or five capital letters she can very rarely point correctly to one that may be named. She does, however, recognise and point out numerals; she can add two numbers together, but cannot subtract or multiply. She can also pick out objects named; she cannot name them, but shows by her expression that she recognises their names when she hears them. She cannot write letters with either hand spontaneously or from dictation, but she can copy single letters printed or written—the former better than the latter. She cannot do transfer copying.

[23] Loc. cit., p. 467.

This case, though interesting, is perfectly simple and needs no comment. The next, though equally cogent, is a little more complex.

CASE 12.—A young woman, aged seventeen years, was admitted into University College Hospital under my care on June 20th, 1896. She had had rheumatic fever when a child, since which she had been always ailing, principally by reason of a heart affection. She had a loud presystolic bruit and some hypertrophy of the left ventricle. On June 8th, 1896, on awaking she found herself paralysed on the right side of the body. During the following day, without the occurrence of any fit, she lost her speech. During the first week of her illness she was very dull mentally, and there was incontinence of urine and of fæces. She also suffered from pains in the left side of the head. When admitted, on June 20th, the paralysis of the right arm and leg was complete, together with slight paralysis of the lower half of the face. There was well-marked right hemianæsthesia, but no hemianopia. There was ankle clonus, with increased knee, wrist, and elbow jerks on the right side. The limbs were flaccid. She was almost speechless. She understood all that was said to her, looked intelligent, and often attempted to speak, but then and since her illness the only words she had uttered had been "yes," "no," and "oh, dear!" She often said "Yes" inappropriately when asked a question, and then immediately shook her head in correction. She could not repeat a single word when bidden. She recognised objects such as pencils, paper, and pens, but could not name them. There was complete alexia; she did not understand written or printed words or short sentences; nor could she point correctly to individual letters. On June 22nd she could repeat short words uttered before her in a slow, hesitating manner, and with indistinct utterance. On June 27th she was much better; she could count up to ten, and say the days of the week when started; she could also name most common objects which she was shown. She could also read aloud short words in print or writing, and understand their meaning. On July 2nd she talked a little in short sentences, though her pronunciation of words was still indistinct, and she had difficulty in recalling the words she wanted. On July 8th she was still improving. She could then move her right leg a little. She talked slowly and indistinctly, but still had difficulty in recalling words, though she did not utter wrong words. She read aloud a few lines of short words from a book slowly, passing over some and miscalling other words. She seemed to understand what she read. Some right hemianæsthesia still existed.

When first admitted this patient seemed to present a typical case of aphasia, but for the existence of the alexia. The fact of the presence of hemianæsthesia showed, however, that the lesion extended back to the posterior third of the hinder segment of the internal capsule, or else that another lesion existed there—that is, in a region very close to the visual word-centre. This, of course, carried with it the possibility that the visual word-centre itself might have been temporarily disabled. The subsequent progress of the case—the speedy clearing up of the aphasia, owing probably to a restoration of the circulation through the first cortical branch of the left-middle cerebral, which may have been temporarily blocked, and the revelation then of some amount of amnesia verbalis—made it all the more likely that the alexia was to be explained by some temporary disablement of the visual centre. That the auditory centre was only slightly (though more durably) affected was shown by the fact that there was never word-deafness and by the patient's subsequent ability to read even better than she could speak spontaneously.

The probability is, therefore, that in the cases of associated aphasia and alexia recorded by Trousseau and others the latter defect is not to be regarded as a consequence of the lesion in Broca's region, but rather as a result of some co-existing damage to the visual word-centre.

3. Does destruction of Broca's region entail agraphia?—The writers whom I have previously named say yes, that agraphia as well as aphasia is entailed by an uncomplicated lesion in the posterior part of the third frontal convolution. But with this doctrine, as already stated, I cannot agree. In writing spontaneously or from dictation there is, I believe, needed for most people a primary revival in the auditory word-centre and secondarily in the visual word-centre, whence combined stimuli pass to the cheiro-kinæsthetic centre, and thence well over in coördinated form to the motor centres in the cord by which the actual writing movements are effected. The evidence that I have already recorded is quite in harmony with this view, whilst it is entirely opposed to the doctrines on this subject formerly enunciated by Trousseau, Hughlings Jackson, and Gairdner, and which have been recently advocated by Déjerine, Wyllie, Mirallié, and others.

4. Is it right to deny the existence of a special centre for the registration and regulation of writing movements?—We are now brought to the consideration of Déjerine's objection to the very existence of a special centre for writing movements—a "cheiro-kinæsthetic centre" as I name it. His reasoning here seems to me rather surprising, and is of such a nature as to make it necessary to premise that the case of writing is almost exactly comparable with that of speaking—and, indeed, of all other habitual voluntary movements, whether

complicated or simple. Each set of movements must be associated with a set of ingoing impressions (kinæsthetic), which are registered in different portions of the Rolandic area of the cortex. This must be as inevitably true for writing movements as for speech movements; and, just as re-excitation of Broca's region under stimulation from the auditory word-centre is necessary for speech, so a re-excitation of the centre in which the impressions generated by writing movements are registered is, under stimulation from the visual word-centre, needful for the production of writing movements.

Yet both Wernicke and Déjerine say that the intervention of a special centre for writing movements is not necessary, on the ground that writing consists in a simple copying of the visual images stored up in the visual word-centres. This, however, is extremely vague. It must be asked, How is the copying achieved? That is, By what cerebral mechanism is it brought about? I maintain that the visual word-centre cannot act directly upon the motor centres in the cord, and that the conjoint activity (for coördinating purposes) of a kinæsthetic centre is quite as essential in the case of writing movements as is the activity of Broca's region for the production of speech movements. By parity of reasoning Wernicke and Déjerine might just as well say that Broca's centre is not needed, on the ground that speech consists in a simple copying of the auditory images stored up in the auditory word-centre, and hold that the auditory word-centre can act directly upon the motor centres in the bulb for the production of speech. But I contend that in each case another regulating centre must intervene, and that such a centre is just as essential for the translation of visual images into writing movements as it is for the translation of auditory images into speech movements.

Again, How can it possibly be alleged as a valid argument against the existence of a cheiro-kinæsthetic centre in a man accustomed to write with his hand that the same man is able to write on sand rudely with his foot, or that he can after a fashion write with his elbow, or with a pencil placed between his teeth? Clearly in these other crude modes of writing he would simply be dependent upon the activity of other parts of the general kinæsthetic centre. Such objections—for they are scarcely worthy of the name of arguments—are therefore altogether futile. The question that has to be considered is whether a man who has learned to write with his right hand, and who habitually writes in this fashion, calls into play a cortical centre the activity of which in the production of those movements is comparable with the activity of Broca's centre in the production of speech movements. To this question there can be but one answer. And the fact that in those cases of word-blindness in which the patient is able to write spontaneously he can subsequently succeed in reading what he has written, by tracing the outlines of the letters with his finger must also be taken as direct evidence of the existence of a cheiro-kinæsthetic centre, as I pointed out many years ago.[26] The impressions produced by the writing movements thus occasioned pass from their centre of registration back to the visual and auditory word-centres, and thus enable the writing to be read. Of course, a patient would not be able to read in this way if his visual and auditory word-centres were destroyed; therefore the objection of Déjerine and Mirallié to this evidence falls to the ground.[27]

Another argument adduced by Déjerine against the existence of a special centre for writing has been based upon an interesting case which he cites very briefly[28] of a patient, left-handed for all acts save those of writing, who became hemiplegic on the left side and aphasic, and at the same time lost the power of writing with his right hand. The patient continued in this condition for four years, and judging from the symptoms (there being no necropsy) Déjerine regarded it as a simple case of "motor aphasia." He thinks that the foot of the right third frontal was destroyed, and that this patient was as incapable of writing as of speaking because he had no longer a "notion of the word," owing to his supposed inability to revive verbal images. The fallacy of this inference has already been shown in part by the cases of Dickinson, Wadham, and others previously recorded; and in part by the evidence I have brought forward as to the non-occurrence of alexia as a consequence of destruction of Broca's region. This latter evidence goes to show that in many cases of what at first sight appear to be cases of simple "motor aphasia" with alexia there is reason for believing that a lesion exists in the hinder part of the hemisphere which may have damaged the visual word-centre. A lesion in this situation may therefore have existed in the case under the care of Déjerine, and thus have accounted for his patient's inability to write as he had been accustomed to do with his right hand. For if his previous power of thinking in words had depended upon the activity of the word-centres in the right hemisphere, then spontaneous writing would have required the activity of the auditory and visual word-centres of this side as a first stage in the process, and secondly that they should be in relation (through the corpus callosum) with the similar centres in the left hemisphere, so that the proper stimuli might be passed on to the left cheiro-kinæsthetic centre for the bringing about of writing movements by the right hand. A damage to the visual word-centre of the right side would therefore have caused this patient to lose his previous power of writing with the right hand. The case under the care of Déjerine therefore admits of an explanation quite different from what he has given to it and which is also much more in accordance with existing knowledge. Clearly it cannot be deemed to support his notion that the kinæsthetic impressions of writing movements are not registered in a definite part of the cerebral cortex, and that this cortical region is not called into activity during the act of writing. That such impressions must be definitely registered in the cerebral cortex seems to me a self-evident truth.

It is, however, altogether another question, and one which does seem open to discussion, whether the cortical centre in which the sensory impressions produced by writing movements are registered exists altogether apart, or whether its structural elements are inextricably mixed up with others pertaining to less special movements of the hand and arm. If there is a completely separate seat of registration, destruction of such a centre should produce loss of the power of writing, independently of paralysis of other less special movements of the limb. If otherwise, the loss of power of writing from damage to the cortical region in which its kinæsthetic impressions are registered would never be able to occur alone, but would always be merged in a more general paralysis of the limb. In other words, no agraphia of this type would be recognisable as such; it would not be looked for, because the co-existing paralysis of the hand and arm would naturally be supposed to be, and would in fact be, a sufficient cause of the inability to write. On the whole it must, I think, be said that no actual proof has yet been given that the centre for writing movements is topographically distinct—in other words, that Exner's or any other separate localisation of such a centre has yet to be definitely proved. The evidence that I have previously cited, though it has been sufficient to discountenance the idea that destruction of Broca's centre of itself gives rise to agraphia, has no pretence to be adequate for the localisation of a separate centre, and the cases that have hitherto been cited in support of Exner's localisation are all of them open to very legitimate objections. There is, for instance, a case recorded by Bar[29] in which an isolated lesion existed in the foot of the second frontal convolution, but, instead of giving rise to agraphia only, there were aphasia and agraphia, and the agraphia was not total (as it should have been if a topographically separate centre for writing had been destroyed, since the patient's penmanship was good); and, though he could not express his ideas either in writing or in speech, he wrote over and over again a certain phrase or word. This case, therefore, though cited by Exner in favour of his localisation, seems to mededicedly opposed to it. Another case, recorded by Henschen,[30] has been cited as favouring Exner's localisation, which has, however, no real value. Here the patient suffered from word-blindness and agraphia, and after death there was found not only a destruction of the foot of the second frontal, but also a softening which destroyed the angular gyrus.

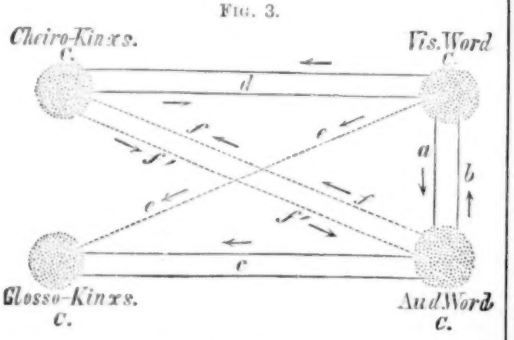
A third case has been recorded by J. B. Charcot and A. Dutil,[31] and is thought by Pitres to favour Exner's localisation. Here the patient was a woman sixty-four years of age, who twenty-nine years before her death had a slight cerebral attack which left her completely agraphic. Subsequently she had three other attacks, which led

[26] The Brain as an Organ of Mind, 1880, p. 646, note.
[27] Mirallié, loc. cit., p. 75.
[28] Mémoires de la Société de Biologie, 1891, p. 97.
[29] La France Médicale, 1878, p. 609.
[30] Klinische und Anatomische Beiträge zur Pathologie des Gehirns, Upsala, 1890, p. 273.
[31] Mémoires de la Société de Biologie, 1893, p. 129.

successively to embarrassment of speech, left hemiplegia, and finally to pseudo-bulbar paralysis. The agraphia persisted throughout her life without appreciable diminution. She could copy letters and figures after a fashion, but was absolutely unable to write spontaneously. There was no word-blindness or word-deafness. At the necropsy five small foci of softening were found in the right hemisphere and two in the left hemisphere, one of the latter being situated exactly in the foot of the second frontal convolution.[32]

Then, again, one of the causes which led Déjerine to deny the very existence of a centre for writing movements seems to have been based upon the characteristics of two cases that were brought forward by Pitres, and which, upon the basis of his authority, have been commonly cited by others as affording evidence of the correctness of Exner's localisation. They were cases in which the patients were unable to write spontaneously or from dictation, and yet were able to copy writing. If the centre is destroyed, says Déjerine, the possibility of executing any kind of writing should be abolished. That at first sight seems perfectly true; and it may be a valid criticism against Pitres for quoting any such cases as instances of "motor agraphia."[33] But Déjerine and his followers have overlooked the possibility that Pitres may not have been quite correct in his interpretation of these cases—in which there was no necropsy. They have not recognised the fact that this particular combination of symptoms may be present without the existence of what is called "sensory aphasia" in any of its forms. It can be shown, however, that such a combination of symptoms may be easily explained by a cutting across of the audito-visual commissure that transmits impressions from the auditory to the visual word-centre (*Fig. 3. b*). This I believe, after careful

FIG. 3.



study of his memoir, to be the explanation of the partial agraphic defects in the two well-known cases cited by Pitres as examples of the effects produced by damage to the cortical centre for writing movements.[34] It is obvious that damage to the commissure above mentioned would be capable of preventing the passage of stimuli from the auditory to the visual word-centre such as would be necessary in writing spontaneously or from dictation, whilst it would leave the power of copying writing intact so long as the visual word-centre, the commissure connecting it with the writing centre, and this centre itself remained undamaged.

At present, then, it would seem that there are no uncomplicated cases of agraphia upon record produced by a small lesion in the cheiro-kinæsthetic centre, or of agraphia as an isolated symptom certainly resulting from damage to some part of the visuo-kinæsthetic commissure. It seems clear, however, that if the centre for writing is topographically distinct, complete agraphia—that is, an inability to write spontaneously from dictation or to copy with anything like facility—should be producible in either of these ways, and that in each case the disability would be uncomplicated with word-blindness, whilst there would be nothing to prevent the patient learning to write with his left hand.

The reason for this extreme rarity of agraphia as an isolated symptom doubtless is that often in what might otherwise have been a simple case of inability to write this very special disability becomes hidden and unrecognisable, owing to the lesion being large enough to cause paralysis of many other movements in the hand and arm. Thus the mere inability to write is hidden by the production of a partial brachial monoplegia. No similar causes intervene to obscure the recognition of simple, uncomplicated aphasia, and yet it must be borne in mind that even this is decidedly rare.

If, then, there are no simple, uncomplicated cases of agraphia that can be quoted, either from disease of the cheiro-kinæsthetic centre or from damage to the commissure between it and the visual word-centre, all that can be done is to cite some of the best instances available in which agraphia has been associated with aphasia, but where the former defect has been more marked than the latter. This was, in fact, the class of cases originally described by William Ogle in his paper on "Aphasia and Agraphia." One of his examples (in which there was no necropsy), where right hemiplegia with aphasia was succeeded by a condition in which amnesia and agraphia were marked, still remains one of the most typical of this kind that can be cited. But two simpler and more typical cases have been recorded by Broadbent[35] to which I would first direct attention. One of them is notable also on account of the remarkable amount of intelligence and energy displayed by the patient, notwithstanding her very defective speech and inability to write. The following is an abstract of this important case.

CASE 13.—A lady, aged about seventy years, had an apoplectic attack on July 26th, 1867. She remained unconscious for nearly twenty-four hours, and was then found to be hemiplegic on the right side and quite speechless. After two or three months she had "quite recovered the use of her limbs and regained a few words." Her relatives treated her as if she were utterly incapable of looking after her own affairs, and especially of taking charge of her own money. This was a great grievance, and when her husband's relatives visited her she tried to make it known by showing her purse and repeating excitedly, "Oh, shameful! shameful!" She had an intense dislike to her attendant, and when she left the room would often look in the direction in which she had gone, shaking her head and exclaiming with great energy, "Oh! nasty! nasty!" following it up by a long story in which there was not a single word intelligible. At length she went to live near her husband's relatives. "A house was now taken and furnished for her, and she showed herself quite competent in making all arrangements about it, and when settled in it with a new housekeeper she seemed quite contented. Her principal topic of attempted conversation for several months was her niece's and brother's bad behaviour to her. She laboured hard to make the friends among whom she now was understand her grievances. She would point out her relatives' names or refer to their letters, or in some other way show to whom she referred, and then in great excitement would exclaim, 'Oh, shameful! shameful!'; then she would turn over letters and newspapers, and when she had tried in vain for hours to convey what she wished she would shed tears and say, 'Oh, pity! pity!' At length her banker's pass-book was obtained from her niece, and she scarcely knew how to express her joy. 'I tried, and I tried,' she said over and over again. But there was still something she wished to explain, and one day, while trying very hard as usual, she made the figures 40 quite distinctly, and it was understood at last that it was something about £40; but it was not till a friend came to see her and this happened to be mentioned that it was discovered she had put £40 into a bank before her attack, and believed her niece had the acknowledgement of it, and some promissory notes with other papers. These she wished to be sent for, and eventually they were obtained. This was nearly a year after her removal, and all the time she had persevered in her attempts at an explanation. During the same time she had been making a new will, and week after week would have her sister-in-law to write out the different clauses. It often took a long time to do it to her satisfaction, but she never rested till every particular was exactly as she wished it; when the right guess was made she showed her satisfaction quite unmistakeably by her gestures, and by saying, 'Yes, yes, that's it.' . . . . That she knew what word she wanted was shown by her resorting to letters and sometimes to a dictionary; and in one of my visits, wishing to recommend a linseed-meal poultice and failing to convey her meaning, she went for the housekeeping book and found an old entry of linseed-meal. She also pointed out to me newspaper paragraphs which interested her. She frequently read, but preferred being read to. . . . . She was quite unable to write or even to sign her name. She once wrote down the figures 40, as related, and sometimes wishing to divide money would make the proper number of marks to indicate the amount of a share." On Aug. 7th, 1871, she had another apoplectic attack, after which she was

[32] Two other cases which have been cited as favouring this localisation, namely—one by Balzer (Gazette de Médecine de Paris, 1884, p. 97) and another by Shaw (Brit. Med. Jour., February, 1892)—have in my opinion no value in this connexion.

[33] Pitres attempts to get over the difficulty standing in the way of his interpretation arising from the fact that the patients were able to copy writing in the following manner. He says (Congrès Français de Médecine Interne, 1894, Rapport sur la Question des Aphasies, p. 10): "Copier, en effet, est toute autre chose qu'écrire couramment. C'est un acte de motilité générale qui n'a pas de centre d'exécution spécialisé, pas plus d'ailleurs que l'acte de tracer sur le sol avec le bout de sa canne, ou avec le pied, des traits ayant la forme de lettres. Ces actes là impliquent une attention soutenue, une surveillance constante de l'esprit, qui manque absolument dans l'écriture courante. C'est pourquoi l'agraphique dont les membres supérieurs ne sont pas paralysés, peut encore copier, bien qu'il ne soit plus capable d'écrire spontanément."

[34] Revue de Médecine, 1884, p. 864. These cases are also quoted more briefly by Wyllie (loc. cit., p. 357), though in the first of the two cases he omits the very important detail that the patient was able to copy writing easily.

[35] Transactions of the Royal Medical and Chirurgical Society, 1872, pp. 146 and 160.

found to be paralysed on the left side. She died on Aug. 12th, and at the necropsy no cause for the last apoplectic seizure was found, but two old apoplectic cysts were discovered in the upper border of the fissure of Sylvius. One "which might hold a nut" was in the situation at the lower end of the ascending frontal gyrus, "and a very small part of the adjacent posterior end of the third or inferior frontal gyrus." "Again, in the supra-marginal lobule over the posterior end of the fissure of Sylvius was another hollow filled with connective tissue, and when the fissure itself was opened out it was found to contain at this part a super-abundance of connective tissue, and the convolutions of the posterior end of the island of Reil were completely atrophied." There was some atrophy also of the tail of the intra-ventricular portion of the corpus striatum.

In addition to the evidences of intelligence and energy displayed by this patient, there is also the fact that there was no alexia associated with the aphasia and agraphia. The latter defect was much more marked than the former; and the fact that the patient could use more words and sentences than are customary may perhaps be explained by the small extent of the lesion in the left third frontal gyrus. Although the paralysis of the right upper extremity had been quite recovered from, the agraphia was absolute. The posterior extremity of the second frontal gyrus was uninjured, but the posterior of the two old focal lesions discovered would probably have destroyed the commissural fibres between the visual word-centre and the cheiro-kinæsthetic centre not far from the former of these centres. In the next case there was a very similar inequality between the ability to speak and the ability to write.

CASE 14.—A German, aged thirty-four years, was admitted into St. Mary's Hospital in February, 1870. He had suffered from rheumatic fever in 1865. On the 4th he fell off his stool whilst at work. Two days after he was found to have lost the use of his right hand and arm and to be unable to speak. On the evening of the 8th he was brought to the hospital, and was then found to be partially hemiplegic on the right side and unable to answer questions intelligibly. He soon began to improve, and Broadbent's notes on the 14th are as follows: "All his answers in a low, smooth tone, without modulation of voice; he could not be induced to utter loudly even a word he could say. Answered 'Yes' and 'No'; told me his age correctly and his name, but indistinctly. Asked how he is replies, 'Better' or 'Quite well,' rather indistinctly. If he had pain in the head since the attack? 'No.' Before? 'Yes, wonderful.' If he slept well? 'Nicht' . . . (something or other which could not be made out). If appetite good? 'No' . . . It was impossible to understand him when he attempted a phrase or when he tried to say anything to which I had no clue." A strong German accent was distinguishable in all he said, whereas before the attack he spoke English particularly well. "A peculiarity of his attempts to read or speak was his persevering effort to master a word, syllable by syllable, by trying on and on again. For example, when asked to read the words 'dict-card' his attempt was something like this, 'Diget, dicht, dite, dite, dite car.' The next moment he pointed to his name, saying, though not very distinctly, 'Dat my name.' Up to this time and a week later, Feb. 21st, he could not sign his name or write the simplest word, such as 'yes' or 'no,' when asked to do so, or copy a word pointed out to him." He remained in the hospital some weeks longer, improving very slowly, and before he left he could "with great effort write his name."

Nothing can be said as to the situation of the lesion here or in the next case, which is the best of those which William Ogle was able to bring forward in his paper. We must be guided only by the clinical facts recorded.

CASE 15.—James Simmonds, aged fifty-four years, after a heavy blow on the left side of the head, seven years ago was obliged to give up his work. He spoke without difficulty or hesitation, but miscalled things strangely. He then had a fit one morning whilst dressing, which left him speechless and hemiplegic on the right side. For a fortnight he could not speak at all, though he was quite sensible. He could not say so much as "Yes" and "No." From this he gradually recovered, but always, as before, miscalled things. . . . A month ago he had a second fit, which left him with less power than before in his right side, but made little or no change in his speech. There is now partial paralysis of the right side, which does not prevent his walking. The facial muscles on that side are slightly affected as well as the limbs. His speech is very hesitating and imperfect. He often stops suddenly at a loss for a word and then frequently uses a wrong one, as, for example, he substituted "barber" for "doctor," "two-shilling piece" for "spectacles," "winkles" for "watercress." He can, however, pronounce any word perfectly when prompted. He says that he generally knows when he has used a wrong word, but not always. Before his illness he wrote a good hand and was above his lot as regards education. Now he cannot form a single letter. Even with a copy before him he makes only uncertain up-and-down strokes. I gave him some printed letters and asked him to pick out his name. After a long time he arranged JICMNOS. Clearly he had some slight notion of the letters which composed his name. According to his wife, before his illness he spelt well, and was very particular about the spelling of his own name, which is one admitting of many variations. When a copy was before him he quickly picked out and arranged his name correctly. He can read; but he says that reading makes him very giddy and causes great pain in the head. His general understanding seems good and up to the average of men in his class.

The conditions here recorded represent the remainders of an attack of aphasia, as it would seem that the amnesia was perhaps not much more than had previously existed. We may conclude that in this case also the most severe or durable lesion was in the track of the commissural fibres between the left visual word-centre and the cheiro-kinæsthetic centre (Fig. 3, *d*), but that in all probability there was also some damage to the former word-centre itself. This latter defect is indicated from the difficulty he had in spelling his name with separate printed letters placed before him; for inability to spell—that is, inability spontaneously to recall the letters composing a word—probably depends in the main upon some defect in the visual word-centre, and although he could read, what is said seems to imply that his powers were perhaps not great in this direction. It is therefore by no means a clear case, but one in which the defects were somewhat mixed.

Although we are unable as yet to cite any simple uncomplicated case of agraphia due to disease in the posterior part of the second left frontal convolution, yet, according to Binet and Fere,[36] it is easy to produce agraphia by suggestion in hypnotised persons. Speaking of their experiments Ballet[37] says: "They show that the loss of the motor memory for writing is of the same order as the abolition of other motor [kinæsthetic] memories, such as those which preside over the ability to smoke, to sew, or to embroider. For each of these acts which we are accustomed to perform there exists, in fact, a motor memory, so much the more easily disturbed, in all probability, as the acts themselves are more complicated and require more delicate muscular combinations. As an example of motor amnesia connected with special movement associations I may recall a curious case related by M. Charcot in one of his lectures: it was the case of a player on the trombone who had lost the memory of the associated movements of the mouth and of the hand necessary for playing on the instrument. All the motor memories in this patient were intact save this one. This musician had forgotten how to handle the trombone, as others had forgotten how to handle the pen." If we substitute in the above-quoted passage for "motor memory" the term "kinæsthetic memory" we may believe the loss of the different kinds of kinæsthetic memory referred to, which can be brought about in hypnotised persons, must be due to a temporary functional inertia produced under the influence of suggestion in the several parts of the general kinæsthetic centre in relation with this or that movement.

It seems best now, at the close of our discussion concerning aphasia and agraphia as combined and separate symptoms, to enumerate in tabular form the different modes in which complete or partial agraphia may be produced. Although I shall thus be anticipating results subsequently to be developed, it will be advantageous to show now how other different forms of agraphia are to be distinguished from those we have been considering and from one another.

AGRAPHIA.

Complete.	Uncomplicated.	1. Destruction of the cheiro-kinæsthetic centre. 2. Destruction of the visuo-kinæsthetic commissure.
	Complicated with word-blindness.	3. Destruction of the visual word-centre.
Partial.	No spontaneous writing or from dictation, but can copy; no word-deafness.	4. Destruction of the audito-visual commissure.
	No spontaneous writing, or from dictation, but can copy; word-deafness present	5. Destruction of the auditory word-centre.
	Can write spontaneously or from dictation, but cannot copy; word-blindness present.	6. Destruction of the visual word-centre (in some educated auditives). 7. Isolation of the visual word-centre from all afferent fibres.

The supposition is that in the large majority of cases the various lesions that have been above referred to as causes of complete or partial agraphia will be in the left hemisphere in right-handed and in the right hemisphere in left-handed persons. Of these various forms Nos. 1, 2, and 7 should occur in all individuals alike, in association with the lesions named; but Nos. 3 and 6 are two degrees of agraphia that may be met with in association with word-blindness according as the individuals in whom the lesions specified occur are "visuals" or strong "auditives" much accustomed to write. On the other hand, Nos. 4 and 5 are two cases in which the same degree of agraphia may be met with, but differing by the absence of word-deafness in the one case and its presence in the other. I say *may* be, because such symptoms might not occur in a strong "visual." It will be observed also that each of the partial forms of agraphia

[36] Les Paralysies par Suggestion, Revue Scientifique, 12 Juillet, 1884.
[37] Le Langage Intérieur, p. 134.

except the first is associated either with word-deafness or with word-blindness.

DEFECTS IN THE AUDITORY AND IN THE VISUAL WORD-CENTRES.

Since the publication in the year 1874 of an important memoir by Wernicke entitled "Der Aphasische Symptomencomplex," it has been the fashion to speak of the defects of speech due to lesions in the auditory and the visual word-centres as "sensory aphasia," in contra-distinction to that produced by damage to Broca's region, which, in accordance with then prevalent notions, was and has since been very commonly spoken of as "motor aphasia." This mode of distinguishing these defects, though it has a certain convenience and has been widely adopted, is not in accordance with my views, as I hold the latter to be as much a sensory region of the brain as the former. It would, I believe, be much better if the term "aphasia" were restricted to the defects of speech produced by lesions in Broca's region, and the term "aphemia" to those dependent upon sub-cortical lesions in the course of the pyramidal fibres, leaving the speech defects produced by lesions of the convolutions around the posterior extremity of the Sylvian fissure to be grouped as so many varieties of "amnesia." Under this latter generic name would be included many forms of speech defect due to defective recall of the auditory and the visual images of words, and produced either by lesions of the auditory and the visual word-centres themselves or of the commissures by which they are united to one another and to corresponding centres in the opposite hemisphere. In all these cases there would be more or less interference with the recall of auditory and visual images of words. And whether we call the case one of sensory aphasia or of amnesia, in each instance alike the precise degree and nature of the defect or defects would have to be settled by a systematic examination, so as to determine whether we had to do with mere diminished recollection of words, with complete loss of their auditory or visual images, or with other combinations of symptoms pointing either to partial isolation of these centres from one another or to isolation from the general auditory or visual word-centres of which they form part. It is true that such a nomenclature involves a slight inconsistency, seeing that aphasia and agraphia are also, in accordance with my views, forms of amnesia due to the non-revival of glosso-kinæsthetic and cheiro-kinæsthetic images respectively. But these kinæsthetic images, as I maintain, play only a small part in thinking processes, and neither of them is subject to independent conscious recall like the auditory and visual images of words which constitute our habitual thought counters. The inconsistency is, moreover, much less than that which is entailed by speaking of "motor aphasia" and "sensory aphasia," as though the former belonged to a radically different category and really depended upon the lesion of a motor centre. The advantage would be great of confining the term "aphasia" to its original signification, and not including under it various types of speech defects which are radically different in nature and produced by lesions in totally different cerebral regions; this is especially desirable when the objectionable generic term "sensory aphasia" can be replaced by another having a very similar general connotation.

It has been commonly supposed, and repeated over and over again by workers in Germany and France, as well as by those writing in our own language both here and in America, that Wernicke was the first to call attention to and explain that form of speech defect that is now known as "word-deafness," this particular name having been given to the condition shortly afterwards by Kussmaul. It is admitted that the companion defect of the visual centre now known as "word-blindness" had been previously recognised by several writers, though it had not been clearly explained; but "word-deafness" was supposed to have escaped observation by writers on speech defects, the individuals suffering from it having been previously thought to be insane, or at least demented.[38]

The merit, however, of having determined the region of the brain at fault in cases of word-deafness (viz., the hinder half of the upper temporal convolution, with perhaps a portion of the hinder extremity of the middle temporal convolution) clearly belongs to Wernicke; though, as I shall subsequently endeavour to show, he was far from correct in saying that the complex of symptoms resulting from such a lesion was word-deafness, paraphasia, alexia, and agraphia. This view as to the symptomatology of the lesion was founded upon too narrow a basis of observed cases with necropsies. A wider experience and knowledge now necessitates its complete revision.

That it is not correct, however, to say that word-deafness and word-blindness were not well understood till Wernicke defined their nature may be shown by the following quotation from my paper "On the Various Forms of Loss of Speech in Cerebral Diseases," published in 1869:—[39]

"Most aphasic patients can *understand perfectly what is said* to them and can follow and feel interested when they hear others read aloud. In these cases we may presume that the afferent fibres connecting the auditory centres of the medulla with the auditory perceptive centres of the cerebral hemispheres, and also these latter centres themselves, are intact, so that the spoken sounds revive their accustomed impressions in the hemispheres, these being perceived as words symbolic of things or ideas, which, being duly appreciated by the individual as they are conjured up, suggest to him the thoughts which they are intended to convey. In certain of the severe cases of aphasia, however, as in that noted by Dr. Bazire, recorded at p. 16, and in Dr. Gairdner's case (Glasgow Medical Journal, May, 1866, p. 13, and Transactions of the Philosophical Society of Glasgow, 1866), it is distinctly stated that the patient either did not gather at all, or with difficulty and imperfectly, the import of words when he was spoken to, though he could be made to understand with the utmost readiness, by means of signs and gestures. Must we not suppose in such a condition either the communication of the afferent fibres with the auditory perceptive centres is cut off, or that this centre itself, in which the sounds of words are habitually discriminated and associated with the things to which they refer, is more or less injured? In either of these cases, though the sound is not appreciated as a *word* having its definite meaning, we must not expect that there would be deafness; the sound would be still heard as a *mere sound*, only it does not call up that superadded intellectual discrimination by the ingrafting of which upon it it can alone be made to serve as a symbol of thought. Hence the individual does not adequately comprehend when spoken to, though he may be quite capable of receiving and appreciating fully the import of signs and gestures which make their impression upon his visual perceptive centres. . . . . And where the individual *cannot read* I am inclined to think this must be owing either to some lesion of the afferent fibres to the visual perceptive centre, of the visual perceptive centre itself, or of the communications between the cells of this centre and those of the auditory perceptive centre. If lesions existed in either of the first two situations the visual impression could not receive its intellectual elaboration, and consequently it could not call up its associated sound (word) in the auditory centres, and hence no meaning would be conveyed by the hieroglyphic marks of the printed or written pages. They would be to the person mere meaningless strokes, just as we have assumed that if similar defects existed in the auditory perceptive centres, or in the afferent fibres with which they were connected, the individual could not appreciate the meaning of spoken words—these would be to him mere sounds."

At the date when this paper was written I knew nothing about what I now term "kinæsthetic centres" and had not fully realised the importance of kinæsthetic functions. At this period, moreover, the notion that definite "motor centres" exist in the cerebral cortex had not been mooted. This explains the reason of the absence of any reference to the needed activity of kinæsthetic centres in the above quotation.

Turning now to the question of the symptomatology of the condition named "sensory aphasia" by Wernicke, and referred by him to a lesion of the posterior extremities of the upper and middle temporal convolutions, it should be observed that Kussmaul shortly afterwards broke up into two sets of symptoms what were originally described as a single group by Wernicke. According to Kussmaul, what he first termed "word-deafness" is the primary and essential result of destruction of the hinder extremities of the upper temporal convolutions; while what he termed "word-blindness" holds a similar essential relationship to destruction of the angular and parts of the supra-marginal gyri. This is the view now commonly held, and both varieties are spoken of as forms of "sensory aphasia," though Wernicke's original doctrine as to the very complex results of a lesion in the auditory word-centre is held at the present day by Déjerine as well as by Mirallié. They both speak of word-deafness, paraphasia, alexia, and agraphia as the results of such a lesion.

It must be admitted that the functional relations of the auditory and the visual word-centres are so intimate, and their sites so close to one another, that a lesion occupying the one is apt more or less to interfere with the functions of the other for a longer or shorter period, which may vary with the nature and abruptness of the lesion, as well as with the different endowments of individuals. Disturbance to a very marked extent of the functions of the visual word-centre as a result of a lesion in the upper temporal convolutions is,

[38] This statement has been repeated by Wyllie in his recently published work on the Disorders of Speech (p. 295), although de Watteville had previously pointed out in Brain (1885, p. 267) that I had five years before the appearance of Wernicke's memoir fully appreciated the nature of the defect as well as that of "word-blindness."

[39] British and Foreign Medico-Chirurgical Review, 1869, pp. 40 and 42.

however, by no means so universal as Wernicke's and Déjerine's statements as to the symptomatology of this lesion would imply. Thus, out of sixteen recorded cases of "sensory aphasia" in which the lesion was pretty closely limited to the hinder part of the first and more or less of the second temporal convolutions, in only five of them is there any mention of the existence of some amount of word-blindness. Doubtless had the patients been studied more minutely (after the manner practised by Thomas and Roux [40])

FIG. 4.

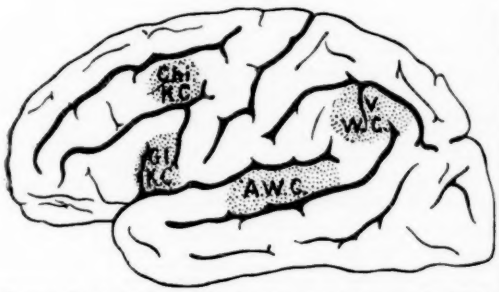


Diagram showing the approximate sites of the four word-centres in the left cerebral hemisphere.

some minor amounts of word-blindness might have been found in others; but that is not what Wernicke meant, and is not other than what might be expected if we look to the close functional and topographical relations of the two word-centres.[41]

It will subsequently be shown, moreover, that paraphasia is met with in only a little more than one-third of these cases, so that Wernicke's "symptomencomplex" does not prove to be at all in accordance with the data at present available, although his views are still adhered to by Déjerine and Mirallié.

It must, indeed, be admitted that the defects in the auditory and the visual word-centres giving rise to word-deafness and word-blindness respectively may occur separately or together, and in the latter case the defective action in the two centres may be unequally developed. Hence the very marked clinical variations that are met with as a result of lesions in the convolutions surrounding the posterior extremity of the Sylvian fissure. Another cause of clinical variations, even with similar lesions, is perhaps to be found in the different degrees of education of the persons attacked, and their consequent greater or less facility in reading and writing. Still another cause of variability is to be found in the varying individual endowments of patients in regard to the relative activity of their different word-centres—in other words, according as the patients are marked "auditives" or "visuals" respectively. Connate individual variations of this kind may give rise to notable clinical differences, even as results of similar lesions.

All that can be done here, therefore, is to point out the most common combination of symptoms, dealing with the various parts of the subject in the following order: (1) defects resulting from abnormal conditions of the left auditory word-centre; (2) defects resulting from destruction of the auditory word-centres in each hemisphere; (3) defects resulting from destruction of the auditory and the visual word-centres of each hemisphere; (4) defects resulting from isolation of the left auditory word-centre; (5) defects resulting from abnormal conditions of the left visual word-centre; (6) defects resulting from isolation of the left visual word-centre; and (7) defects resulting from combined lesions of the left auditory and visual word-centres, together with some remarks on the condition which has been named "psychical blindness" or "object blindness."

1. DEFECTS RESULTING FROM ABNORMAL CONDITIONS OF THE LEFT AUDITORY WORD-CENTRE.

Of all the word-centres the integrity of the auditory is of the most importance, and the defects due to different degrees of functional disability therein are the most varied, because this is the centre in which in the great majority of individuals words are first revived during thought, whether this be silent or whether it constitute the first stage in the processes of speaking or of writing. The effects of functional degradation or of partial damage to this centre may be considered first, and afterwards those resulting from its complete destruction.

(*a*) *Effects produced by functional degradation or partial damage of the left auditory word-centre.*—In the slighter degrees of damage and functional degradation we have to do with the most typical forms of verbal amnesia, in which various words fail to be recalled as they are needed in ordinary speech. The term "amnesia verbalis" applies especially to this defect, and the objections that have been raised to it on the ground that loss of auditory images constitutes only one kind of verbal amnesia are of no practical value because the two kinds of kinæsthetic images are, as I maintain, not spontaneously revivable as primary thought counters, and because it is only in rare cases that visual images of words are primarily revived. The term "amnesia verbalis" is therefore especially applicable to this particular functional disability of the auditory word-centre.

This failure to recall words is always most marked with the names of persons, places, and things, these being the most specialised units of speech. The most familiar type of this defect is that which occurs as a result of defective nutrition, either with advancing years or during convalescence from prostrating diseases. Such persons are often noticed to halt in their speech, owing to their inability to recall some such words. Occasionally, however, a similar or more marked defect of the same order occurs as a result of some more or less distinct lesion of the brain. A good example of amnesia of this type, where the "volitional" recall of names was impossible though their "sensory" recall was preserved, is thus referred to by Trousseau in his "Lectures." [42]

CASE 16.—"The patient does not speak because he does not remember the words which express ideas. You recollect the experiment that I often repeated at Marcou's bedside. I placed his nightcap on his bed and asked him what it was. After looking at it attentively he could not say what it was called, and exclaimed, 'And yet I know well what it is, but I cannot recollect.' When told that it was a nightcap he replied, 'Oh! yes, it is a nightcap.' The same scene was repeated when various other objects were shown to him. Some things, however, he named well, such as his pipe. He was, as you know, a navvy, and therefore worked chiefly with the shovel and the pickaxe, so that these are objects the names of which a navvy should not forget. But Marcou could never tell us what tools he worked with, and after he had been vainly trying to remember, when I told him it was with the shovel and the pickaxe, 'Oh! yes, it is,' he would reply, and two minutes afterwards he was as incapable of naming them as before."

As Lichtheim points out,[43] evidences of amnesia are "more easy to demonstrate when the patient is made to name objects than when he is engaged in ordinary talk; names which occur without effort in fluent speaking arrest him when he has to find them for objects or persons shown to him." There is general agreement as to the fact that in amnesia words are lost in a tolerably definite order. First there are failures in the recall of proper names, then of other nouns; and only much more rarely of verbs, adjectives, and pronouns. Of this fact different explanations have been given. I will quote two of the best. Kussmaul says:—[44]

"The more concrete the idea the more readily is the word to designate it forgotten when the memory fails. Probably the only reason for this is that the conceptions of persons and things are more loosely connected with their names than the abstraction of their circumstances, relations, and properties are. We easily represent persons and things to ourselves without names; the image of sense is here more important than the symbol—i.e., the name—which conduces but little to our comprehension of personages or objects. More abstract conceptions, on the contrary, are attained only with the aid of words, which alone give them their exact shape. Hence verbs, adjectives, pronouns, and, still more, adverbs, prepositions, and conjunctions, possess a much more intimate relation to thought than nouns. We can conceive that the processes of

[40] Bulletin de la Société de Biologie, 22 Février, 1896.

[41] The cases to which I refer where the lesion has appeared to be pretty completely limited to the hinder part of the first or of the first and second temporal convolutions are those which in Mirallié's list (De l'Aphasie Sensorielle, 1896, p. 135) are numbered, 1, 3, 4, 6, 7, 10, 12, 14, 19, 21, 25, and 32; together with those in Amidon's list (New York Medical Journal, 1885, pp. 113 and 181) numbered 7, 14, 17 and 18. Of these, the five cases in which some amount of word-blindness co-existed are those which in Mirallié's list are numbered 12, 14, 19, 21, and 25. In Amidon's No. 11, moreover, there was the co-existence of aphasia and word-deafness, owing to simultaneous lesions in Broca's region and in the upper temporal convolutions; nevertheless the patient showed neither alexia nor agraphia. I have purposely alluded to these two lists, which include, I believe, almost all the complete cases with necropsies of "sensory aphasia" hitherto published (many of them being included in both lists), because they are both fairly accessible, and a reference to them will thus enable anyone interested in the matter to verify the correctness of my statements and criticisms with comparative facility.

[42] Translation by Bazire, 1866. Part I., p. 267.

[43] Brain, January, 1885, p. 473.

[44] Ziemssen's Cyclopædia, vol. xiv., p. 759.

excitation and the combinations in the cellular network of the cerebral cortex must be much more numerous for the creation of an abstract than of a concrete conception, and that the organic tracts which connect the former with its name must be correspondingly much more numerous than those of the concrete."

The other explanation, which may be considered as supplementary to, and not incompatible with, Kussmaul's, is that which was given by Ross. He said:—[45]

"The science of language teaches unmistakeably that the language of aboriginal man consisted almost entirely of verbs, demonstrative pronouns, and a few adverbs of time and place, and that the names of even common objects are always derivative, and consequently of much later growth than the roots themselves, and it is only what might have been expected that in the dissolution of language caused by disease nouns should disappear from the vocabulary of the patient before the parts of speech which have been first developed, and therefore most deeply organised."

In the slighter forms of amnesia the efforts at recollection of a person who is "at a loss for a word" tend also to call the visual word-centres into an incipient activity. Graves [46] placed on record an excellent illustration of this fact, though he quotes the case merely as "a remarkably exaggerated degree of the common defect of memory observed in the diseases of old age, in which the names of persons and things are frequently forgotten, although their initials are recollected."

CASE 17.—"The man was a farmer, fifty years of age, who had suffered from a paralytic attack, from which he had not recovered at the time of observation. The attack was succeeded by a painful hesitation of speech. His memory was good for all parts of speech except noun-substantives and proper names; the latter he could not at all retain. This defect was accompanied by the following singular peculiarity: he perfectly recollected the initial letter of every substantive or proper name for which he had occasion in conversation, though he could not recall to his memory the word itself. Experience had taught him the utility of having written on manuscript a list of the things he was in the habit of calling for or speaking about, including the proper names of his children, servants, and acquaintances; all these he arranged alphabetically in a little pocket dictionary, which he used as follows: if he wished to ask anything about a cow, before he commenced the sentence he turned to the letter C, and looked out the word 'cow,' and kept his finger and eye fixed on the word until he had finished the sentence. He could pronounce the word 'cow' in its proper place so long as he had his eyes fixed upon the written letters; but the moment he shut his book it passed out of his memory and could not be recalled, although he recollected its initial and could refer to it when necessary. He could not even recollect his own name unless he looked out for it, nor the name of any person of his acquaintance; but he never was at a loss for the initial of the word he wished to employ."

The fact, moreover, that in those cases where we cannot "get out" a particular word we often seem to know something of its length, and can say that it consists of about so many letters, also seems to testify to an abortive revival of the word in the visual centre. But the fact that this partial revival is not associated with full consciousness of the word and does not enable it to be written is one of considerable significance, because it seems to show how all-important in the majority of cases is the primary revival in the auditory centre, not only for the accomplishment of speech, but also for that of writing, the visual word-centre being probably called into play in writing spontaneously as well as in writing from dictation through the intermediation of the auditory word-centre.

It seems reasonably certain that in the great majority of cases in reading aloud there is first the excitation of the visual word-centre, then the passage through commissural fibres of stimuli to related portions of the auditory word-centre before the stimulus passes on to the glosso-kinæsthetic centre.[47] This affords the explanation of another peculiarity in the class of cases of which we have been speaking, as well as of others in which the amnesia has been even more profound. Many cases have, in fact, been recorded in which the patients' speech has been so disordered that they could scarcely say more than three or four consecutive words, and could perhaps utter no nouns; yet when a book is placed before them they are capable of reading aloud correctly and with ordinary facility. I have seen three such cases. One of them was a typical instance, and the following are some details concerning it.

CASE 18.—A lady, aged eighty-one years, had a slight stomach derangement, followed by diarrhœa, in the spring of 1885. She had been rather deaf for many years, but after this slight illness an amnesic difficulty in speech very gradually became more and more pronounced, and after about eighteen months became associated with marked paragraphia. Two years after the commencement of this speech trouble I found this patient capable of understanding all that was said to her in a sufficiently loud and distinct voice. She was thoroughly capable, also, of superintending her household affairs, correct in her accounts, and always knew exactly what change she ought to receive after having given money for the purchase of food or other necessaries. She made use of brief sentences, generally stopping short when she came to a noun, or she would then substitute the word "things" for any such part of speech. Thus, she said, "I will go up and see what we can," meaning that she would go upstairs and see what she could find; or "Will you have the things?" meaning some refreshments for a journey. At this time she was accustomed to read novels with large print for several hours daily. I found that she could read aloud as well as ever, and she did actually read to me, with only two or three slight mistakes in pronunciation, nearly half of a column of a newspaper. I was able to satisfy myself, also, that she understood the meaning of what she was reading; her laughter when I gravely gave her a short amusing paragraph to read left no doubt as to this point. During the next six months her condition became steadily but markedly worse. Here is a letter written to her son about the end of June, in which for the first time she omitted to put the name of the month and his Christian name at the commencement of the letter. "29, -87.—MY DEAR PAPA.—I hope you are well, and think you are well for something for the Queen, and too things for the Queen (evidently referring to two papers which had been sent to her with details of Jubilee proceedings.] Pills for the father [an intimation that she wished some pills to be sent to her.] I hope you are well.—Yours affectitory." [The surname was spelt wrongly; she had previously always signed with the Christian name alone.]

Here are a few details concerning another of these cases, in which, however, the amnesia was much less severe.

CASE 19.—A lady, aged sixty-five years, was sent to me on Feb. 18th, 1893. She had had no fit of any kind, and no pains in the head—only a feeling of "confusion in the occiput" for several years. She had suffered much from throat affections in early life, and there had been some deafness for nearly thirty years, which had slowly increased. She did not hear the ticking of a watch on either side even with contact. She heard a tuning fork on both sides with contact, and also for about two inches away from the ear on each side. Her husband died four years previously; she then became weak and suffered from dyspeptic symptoms for several weeks. There was no illness after this, but eighteen months ago she began to suffer from difficulty in expressing herself. There was no defect of articulation, but a difficulty in finding words, and this trouble had become much more marked for the last five months. There had been no unilateral weakness and there is no trace of any now. She speaks in broken sentences, omitting smaller words, and is often at a loss for a noun. Articulation is distinct. She reads from a book fluently, correctly, and with no appreciable hesitation.

A good instance of this degree of lowered excitability of the auditory word-centre was also reported by Ross.[48]

Lichtheim has likewise recorded an extremely interesting case of this type. It occurred in the person of a busy medical practitioner who met with a carriage accident and was carried home unconscious. There was paresis of the right arm and leg and he was confined to his bed for about a week. The following are some of the particulars given by Lichtheim as to the patient's condition.

CASE 20.—Speech was much affected; the first day the patient only said "Yes" or "No," but quite appositely. Gradually more and more words returned, at first imperfectly. Whilst his vocabulary was still very meagre, it was observed that he could repeat everything perfectly. Soon after the accident he began to read with perfect understanding. It was established beyond doubt that he could read aloud perfectly at a time when he could scarcely speak at all. The statements of his wife are most positive and trustworthy upon this point, though he himself does not recollect what took place just after the accident. She states that after much difficulty in making himself understood by gestures he obtained a newspaper, and to the great astonishment of all present he began to read fluently. She herself thought it most strange and inexplicable. . . . . He could not write voluntarily at all; but this faculty returned slowly and imperfectly, as did speech. On the other hand, he could, soon after he left his bed, copy and write from dictation.

The meaning of this ability to read aloud in such a case is that though the auditory word-centre is so much damaged as to be unable to act spontaneously (that is, under volitional stimuli), it is still capable of responding to the associational stimuli coming to it as a result of strong excitation of the visual centre.[49] Persons so affected are also quite capable of responding to sensory stimuli passing direct to the auditory centre itself—that is, they can at once repeat words uttered before them.

Another very interesting but more complicated case

[45] Loc. cit., p. 112.

[46] Dublin Quarterly Journal, 1851.

[47] Several of the writers on aphasia, however, in their diagrams assume that the stimulus passes direct from the visual word-centre to Broca's region (See Ballet, loc. cit., p. 164).

[48] On Aphasia, 1887, p. 40, Case 8. I am a little puzzled, however, in view of the simple explanation that can be given of this patient's defect, to find that in different parts of his work Ross describes cases essentially similar under different names—see the case of a boy referred to on p. 68 as an example of what he terms the "second degree of aphemia," and also his reference to another example (on p. 72), which he terms, after Kussmaul, "aphasia of recollection."

[49] Lichtheim's interpretation of this case (Brain, 1885, p. 447) is wholly different from mine. He accounts for it by supposing a damage of commissural fibres to exist, which pass between his postulated "centre for concepts" and Broca's convolution, which for him also is a motor region rather than one of sensory type. These are the cases which Lichtheim includes in his Type IV. A defect closely allied to this which I have just been considering has been described by Broadbent in a paper "On a Particular Form of Amnesia; Loss of Nouns" (Transactions of the Medico-Chirurgical Society, vol. lxvii., 1884, p. 249). His explanation is also more in accordance with that of Lichtheim than with mine.

illustrating the same degree of amnesia has been recorded by Dr. P. J. Cremen,[50] the essential details of which are as follows.

CASE 21.—The patient, a man of intemperate habits, was admitted to the Cork North Infirmary on April 10th, 1885. He was the subject of aortic and mitral disease, fully compensated, which had followed an attack of rheumatic fever in childhood. About October, 1883, he suddenly became giddy, with loss of speech, but no paralysis of limbs. He continued to work during the same day, and during five months his speech slowly improved very much. "He now commenced to do some light work, being able to make himself understood fairly well, occasionally using one word for another." About Christmas, 1884, on awaking one morning, he was surprised to find that he had lost the sight of his left eye. (This was subsequently found to be due to embolism of the central artery of the retina.) "He continued otherwise the same as regards speech, until about four weeks before admission, when, after a hard day's work, whilst in the act of holding a candle, he suddenly allowed it to drop and commenced to cry. His speech again became very imperfect and his face was slightly drawn, but there was no appreciable paralysis of limbs." Since then no change had taken place in his symptoms. On admission volitional speech was much affected. When asked of what he complained he pointed to his left temple and said he had a pain there, and on being asked if it was constant he said not. He also pointed to the left eye, and indicated that he could not see with it. His memory of names, places, and things was very defective. He did not recollect the names of his father, mother, or other near relatives. When asked to try, he made an effort to do so, sometimes repeating his own name instead, evidently knowing that he was wrong. When corrected, he repeated the name distinctly, having no difficulty whatever in articulation, the latter being very distinct. When asked to name the organs of sense he called the ear a "hair-pin," and named correctly the nose and tongue; he did not recollect the name of the eye, and called this also the "tongue"; but when corrected said, "Yes, eye; that's right." When further questioned he became confused, calling nearly everything that was shown to him "tongue." His vocabulary was, however, liable to variation from day to day. When asked to repeat the Lord's Prayer he failed to do so, but repeated another prayer instead; however, when given the first sentence he repeated it through correctly. His understanding of spoken and written language was perfect. He could repeat accurately and quickly words spoken before him. Notwithstanding this great defect of memory of words, he could read aloud clearly and distinctly, without hesitation, a page of a book from beginning to end. The following composition, in which it is impossible to discover any meaning, was written by him at my request as the history of his case: "Cork Molens.—I noscent nountg ani ammbys gosisbyoyey imitwats yab I bet yas you me sent sml me good me much cocleped." He wrote his own name and residence accurately, and could write numerals to any extent without dictation. The following will exemplify defects in writing from dictation. When asked to write the word "just" he wrote "fugl," for "subject" "supfect," for "speak" "sery," for "found" "spunt." Strange to say, when told to spell those words he did so accurately in every instance, and when asked why he did not write them he explained that he had forgotten how to make the letters. He remained in hospital for about three months, and left much improved in his speech, being able to carry on a conversation fairly well, though occasionally using one word for another. He could name objects better. Volitional writing was not improved; writing from dictation was slightly better.

Apart from the marked amnesia with preservation of ability to read aloud, this case is remarkable for the gibberish character of the patient's writing, combined with an ability to spell correctly—two characters that do not often go together. In this relation it may be mentioned that it sometimes happens that the speech of patients is entirely limited to a mere imitative repetition of words spoken in their hearing, while they are without the power of volunteering any statement—that is, their auditory word-centres respond only to direct sensory incitations, and not at all to those of an associational or volitional order. In these cases (usually included under the term "echolalia") a marked general mental impairment almost invariably co-exists.

A defect of this kind (occurring in a woman who was hemiplegic from cerebral hæmorrhage) has been recorded by Professor Bêhier.[51] She was born in Italy, and had resided both in Spain and France; of the three languages she had thus acquired she had completely forgotten the Italian and Spanish, and had only retained a most limited use of French. In this latter language *she only repeated like an echo* the words pronounced in her presence, without, however, attaching any meaning to them. But in the case of a woman seen at the Salpêtrière by Bateman the mimetic tendency was much stronger. She even reproduced foreign words with which she had never been familiar. It is clear that in such a case as this there must have been a mental degradation of a much wider kind than that which occurs when the auditory word-centre alone is reduced to its lowest grade of functional activity.

[50] Brit. Med. Jour., Jan. 2nd, 1886, p. 14.
[51] Gazette des Hôpitaux, May 16th, 1867.

THE Farnham Rural District Council on April 1st granted an extra donation of £20 to the medical officer for his special services during the recent outbreak of diphtheria.

ON FUNCTIONAL MURMURS: A FURTHER CONTRIBUTION IN ILLUSTRATION OF THE MIMICRY OF ORGANIC HEART DISEASE.

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SINCE my paper on Functional Heart Murmur appeared in THE LANCET of July 27th, 1895, I have met with a number of additional cases illustrating the difficulties attending the diagnosis of heart disease. A few of these I have selected in order to call attention once more to the frequency with which functional disturbance simulates organic mischief. The subject is of great importance, and I am the more disposed to pursue it because of the interest shown by a number of thoughtful clinical observers who noticed the paper. I ventured to refer to three varieties of functional murmur—namely, the cardio-hæmic or anæmic, the cardio-muscular or neuro-typtic (so-called), and the cardio-respiratory. To this nomenclature I am disposed to adhere, though I am quite free to admit that the explanation offered of the murmurs may not be entirely correct. In some respects the appended cases resemble closely those alluded to in my first paper; in others they differ, and chiefly in point of time that the murmurs occupy in the cardiac cycle.

CASE 1.—A man, aged fifty-two years, a life-long neurotic, who lived in dread of the development of organic disease, complained of dyspepsia, pain after food, flatulency, loss of appetite, some reduction in weight, palpitation, and a sense of general weakness. The heart rate averaged 85; the apex beat was in the fifth interspace, about half an inch to the left of the usual position. On auscultation at the apex the first sound was reduplicated; the second part of the double sound was little more than an echo, and was followed immediately by a well-marked blowing murmur, which ran up to the second sound. This post-systolic murmur was audible from the apex to the sternum and up to the lower border of the third rib, was lost over the aortic valves, and was scarcely, if at all, conducted beyond the apex towards the left. It disappeared when the patient held a deep inspiration, was intensified when he was lying on the left side, and materially diminished when on the right side. It was also diminished on resting, but did not entirely cease.

CASE 2.—A young man, aged twenty-one years, was examined by a medical man and passed for an office under a public body in June, 1996, when no murmur was detected. He was examined by another practitioner within the next few weeks, and a murmur found, and again with the same result six weeks later. He was advised to consult his own medical man, who at the first examination detected the murmur; but on seeing the patient a few days later when at rest failed to do so, and sent him to me. The patient was thin and pale, and was not conscious of palpitation or shortness of breath. He had never had rheumatism, and was able to lie on either side at night. When sitting the pulse was 126, small, regular, and compressible. When lying on the back a voluminous pulsation in the precordium was visible, with apparent displacement of the apex-beat downwards and outwards. This was, however, more apparent than real, as the nipple was three-quarters of an inch above its natural point. The apex was in the fifth interspace two and a half inches from the border of the sternum. On auscultation, when standing or sitting, a short, loud, blowing, systolic murmur could be heard at the apex and half an inch to the left of that point. This was conducted along the fifth rib to the centre of the sternum. The murmur was intensified during inspiration and was at a minimum at the end of expiration. On drawing a long breath as the end of inspiration was approached it became very high in pitch and resembled the sound caused by squeezing air through a hole in an india-rubber ball. When he held his breath at the end of a deep inspiration the heart became suddenly slower and two or three deliberate beats occurred which were unaccompanied by murmur. Fifteen minutes' rest in the recumbent position brought the heart down to 110, when the murmur could no longer be heard so long as he held his breath at the end of a deep inspiration, and the area over which the murmur was heard under other conditions was much reduced—that is to say, it was only to be detected over the immediate apex after rest.

CASE 3.—A woman, aged about twenty-eight years, was seen for headaches and nervous depression about four months

after her first confinement. The patient was somewhat anæmic, but otherwise looked well. She was able to move about briskly and was free from breathlessness. On examination of the heart the apex beat was found to be somewhat prominent, but in its normal position. The heart sounds were clear and rather accentuated, about eighty-five in the minute. A well-marked blowing murmur was heard in the fourth interspace about one inch from the left border of the sternum. It distinctly followed the first sound, and appeared to run up to the second sound, an interval occurring between the first sound and the murmur. The point of maximum intensity of this post-systolic bruit was at the place indicated, and it was well heard beside the sternum, but not at the base, and was scarcely audible at the extreme apex and not at all outside of it. At the end of a deep inspiration the murmur was absent. It disappeared after treatment by rest and arsenic.

CASE 4.—This patient, a married woman aged forty-one years, had been an invalid for some years. Fifteen years before she came under observation the ovaries were removed for tubal disease. She had not menstruated since the operation. She suffered much from palpitation and nervousness. The pulse was regular, jerky, 100, even when lying in bed. The area of the cardiac impulse was increased, and the whole of the precordial region heaved more or less with the systole. The extreme apex was behind the fifth rib three inches from the left border of the sternum. Notwithstanding the excessive impulse the cardiac dulness was slightly, if at all, increased. On auscultation at the extreme apex the sounds were very loud and "membranous," and a short blowing murmur accompanied the first sound. This was best marked towards the termination of the sound and increased in intensity as the sternum was approached, where it became musical. It was audible as high as the third interspace as a musical sound, but was merged in the second interspace in a soft blowing murmur (hæmic) At the end of a full breath it was much diminished, and it was greatly exaggerated when the patient lay on her right side. It was not audible to the left of the apex. At times when the patient was free from excitement the murmur was entirely absent.

CASE 5.—A boy, aged twelve years, with a nervous history, often had attacks of the nature of hysteria. He complained of giddiness and some shortness of breath on exertion. He had never had rheumatism. On examination of the heart there was a tumultuous heaving impulse. The apex was a little below the normal position; there was no thrill. A loud, short, systolic murmur could be heard to the left of the sternum. It was best marked about the fifth rib and was not audible at the immediate apex. There were no basic murmurs. The heart beat was 120, jerky and regular. The murmur became much more localised after resting, even though the number of heart beats was not reduced to any extent. On drawing a deep breath the murmur was absent at the end of inspiration. On lying on the right side the murmur was first intensified by the movement, but after a few minutes disappeared altogether.

CASE 6.—A man, aged twenty-nine years, had suffered from cough, night-sweats, and some emaciation for three or four months. He was highly nervous and somewhat short of breath. The right chest was flat beneath the clavicle, where the note was relatively dull. When standing, a loud, short, diastolic murmur could be heard to the right of the sternum. The point of maximum intensity was just above the right nipple, but it was audible from the clavicle to the fifth rib. The heart beat was jerky and nervous (120 in the minute), but after ten minutes' rest came down to 90 and the murmur disappeared. It also disappeared on the patient drawing a long breath and holding it. Over the same area a well-marked systolic cardio-respiratory murmur was heard during a quiet deep inspiration, but this was quite distinct from the sound already referred to. The pulse was small and rapid, but not suggestive of Corrigan's.

CASE 7.—Another case, closely resembling the above, was that of a man, aged thirty-eight years, who was admitted into the Royal Infirmary, Newcastle, in December, 1896, for cough and hæmoptysis. There was some retraction of the right lung and evidence of early phthisis. There was a short, whiffing, early diastolic murmur which terminated abruptly in the second sound. It was best heard between the apex and the sternum along the fifth interspace. It was loud on excitement, but disappeared on resting or on holding the breath.

CASE 8.—A man, aged twenty-nine years, of habitually nervous tendency, had complained for upwards of three years of a pain about the left nipple, which he ascribed to his heart. He had frequent attacks of palpitation with a feeling of intense apprehension of approaching danger, when he trembled all over. The pain was worse at night. The heart was rapid, 100 in a minute when standing. The left apex beat was in the nipple line between the fifth and sixth ribs. In the erect posture a loud, systolic, blowing murmur was heard at the apex, beyond which it was not conducted, being limited to within a narrow circle at this point. This murmur was intensified on drawing a long breath, and was increased in loudness as the inspiration reached its termination, but on holding a very long breath it disappeared. After lying down for a few minutes it was no longer audible.

A few points stand out prominently in connexion with these mimetic murmurs: firstly, they occur in highly neurotic people; secondly, they are frequently associated with violently acting ventricles independent of lung conditions; thirdly, they may be intimately connected with respiration and structural alterations in the lungs; fourthly, they are not limited to any cardiac area; fifthly, they may be systolic, post-systolic, or early diastolic; and sixthly, they can be diagnosed by an appeal to certain tests, chiefly rest, position, and respiratory movements. (See table at end of first paper, THE LANCET, July 27th, 1895, p. 196).

Newcastle-on-Tyne.

A CASE OF PHTHISIS COMMUNICATED FROM HUSBAND TO WIFE.

BY WILLIAM MURRELL, M.D., F.R.C.P.,
LECTURER ON PHARMACOLOGY AT THE WESTMINSTER HOSPITAL.

A WOMAN, aged thirty-six years, was admitted into the Westminster Hospital suffering from phthisis. Both her father and mother were alive and well, and she had three sisters and one brother all grown up and in good health There was no history of phthisis in her family on either side. Her husband was apparently healthy when she married him, but his father and one sister died from phthisis. After a time he developed a cough, spat blood, and ultimately died, it being stated on the certificate that the cause of death was phthisis During the last seven months of his life he was too weak to go out, and his wife nursed him incessantly. They had only one small room, and the fire was kept burning day and night. He expectorated a great deal, and no directions were given her as to the use of antiseptics. Soon after his death she noticed that she had a bad cough, and when she came under observation it was found that she had cavernous breathing with whispering pectoriloquy at the right apex and dulness and crepitation at the left. She stated that she was no worse off in consequence of her husband's death, but that, on the contrary, her means had improved, as during her husband's illness she had to keep him.

Remarks.—This case is of no particular interest in itself, but it is so when taken in conjunction with similar cases recorded in THE LANCET of May 22nd, 1880, and a similar series of cases published by Dr. Reginald Thompson in THE LANCET of Nov. 6th of the same year, as marking the change of opinion respecting the contagiousness of phthisis which has taken place since that time. Sixteen years ago such cases were regarded with suspicion and their publication excited hostile criticism; now they are so common that they excite but little comment. Dr. Hermann Weber[1] gave details of thirty-nine wives who became infected from marrying phthisical husbands, and in several cases the husband infected more than one wife. The reason the husband infects the wife more frequently than the wife the husband is explained by the fact that when the husband is ill the wife nurses him, but when the wife is ill the husband from the increased demands on his resources has to pay closer attention to business and is less at home than usual. In connexion with the subject of the contagiousness of phthisis it is difficult to avoid reference to the risk which is run by healthy people on long sea voyages if compelled to occupy the same cabin with patients suffering from advanced phthisis. The sleeping cars which convey large numbers of phthisical patients to the Riviera and other popular health resorts at certain periods of the year are not above suspicion, and much greater care should be taken in having them aired and disinfected than is at present the case.

Welbeck-street, W.

[1] Transactions of the Clinical Society, vol. vii.

ILLUSTRATIVE CASES OF APHASIA.

BY BYROM BRAMWELL, M.D., F.R.C.P. EDIN., F.R.S. EDIN.,

PHYSICIAN TO THE EDINBURGH ROYAL INFIRMARY, LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE, SCHOOL OF MEDICINE, EDINBURGH, ETC.

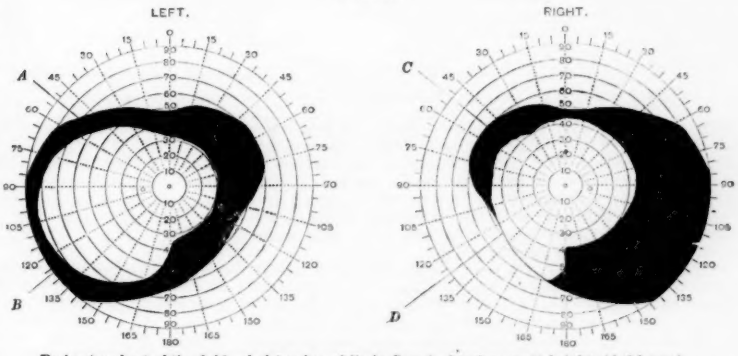
(Continued from p. 953.)

CASE 4. *Paralysis of the right hand and arm; aphasia; very marked word-blindness presenting the peculiarity that the patient could read many words (combinations of letters) while he was absolutely unable to recognise the individual letters of which they were composed, with some impairment of the motor side of the speech mechanism; partial right-sided homonymous hemianopsia, with some peripheral constriction of the sound half of each field.*—This case was brought before the Edinburgh Medico-Chirurgical Society, and published in the *Edinburgh Medical Journal*, September, 1887, p. 241. It is of great importance, for, so far as I know, attention had not been previously directed to the interesting fact that some word-blind patients can read words (combinations of letters), and yet are unable to read the individual letters of which those words are composed. It is curious that the case seems to have been almost entirely overlooked, not only abroad, but in this country. I re-publish it exactly as it was originally printed, and without any addition to the comments which I then made, further than to say that some similar cases have since been recorded and that the same explanation of the facts which I originally advanced has also been suggested by other and independent observers. The following is the original record.

"The point of greatest interest in this well-marked case of word-blindness is the fact that the patient, who was absolutely ignorant of the individual letters and did not even recognise them when they were named to him, was nevertheless able to read many words—i.e., letters when taken in combination. I am not aware that such a condition has been previously described. It is usually supposed that the highest degree of word-blindness is manifested by inability to read individual letters rather than individual words—that, in short, individual letters, which are generally considered to be the most elementary parts (least highly specialised) of written speech, as they undoubtedly are the first to be acquired, are the last to be lost and destroyed. It might therefore at first sight be argued that the fact that a word-blind patient who was utterly ignorant of the individual letters, as letters, was nevertheless able to read combinations of letters or words was opposed to the great doctrines of evolution and dissolution which Herbert Spencer, Hughlings Jackson, and others have so satisfactorily applied to the elucidation of the pathology of the nervous system, and which so greatly aid the intelligent comprehension of the derangements of the functions of the brain. When, however, the matter is looked at more closely this apparent exception will, I think, be found to conform to the general rule, for after the preliminary difficulties of learning to read have been overcome, and the act of reading has become facile and has been frequently repeated, the individual letters are, by some persons at all events, ignored, and it is the combination of letters—syllables and individual words—to which attention is chiefly directed. In short, it may be supposed that in some persons the syllable and individual word become after a time less highly specialised (i.e., more elementary) parts of written speech (when read) than the individual letters. If this be so we should expect the form of word blindness which I am now describing to be more frequent in well educated and intelligent people, to whom the act of reading has, as it were, become automatic, than in uneducated persons and those who before their illness could only read with difficulty and by spelling out (by the help of individual letters) the separate syllables and words. The notes of the case are as follows.

"A very intelligent man, aged sixty years, who had for many years occupied a responsible position as clerk of works, was sent to me on March 9th, 1887, by the late Dr. T. G. Balfour, suffering from paralysis of the right arm and aphasia. He stated that he had enjoyed excellent health until April 15th, 1886, when he lost the power of moving the thumb and forefinger of the right hand. The paralysis was only slight, and passed off in the course of a few days. Speech was not affected on that occasion. He remained well until Oct. 7th, 1886, when he had a second attack. On this occasion all the fingers of the right hand were powerless, but the movements of the elbow and shoulder were not affected, nor was speech implicated. He slowly and gradually recovered from this, as he did from the first attack, and continued to follow his employment as clerk of works until Dec. 22nd, 1886, when the present attack came on. On the morning of Dec 22nd he felt sick when he got out of bed; loss of power in the right hand and arm and inability to speak then developed, and were complete in the course of a few hours. Neither on this nor on either of the two previous occasions was the onset of the paralysis attended with coma. At first the loss of power was almost complete in the upper arm and forearm as well as in the hand, but in the course of a few weeks he began to move the arm at the shoulder and elbow. There has been no perceptible improvement in the paralysis of the hand nor in the power of speaking. The leg and face were in no way affected. On March 9th, 1887, when the patient first came under my observation, there was absolute inability to move the fingers and thumb of the right hand; the patient could pronate, but was unable to supinate, flex, or extend the hand on the wrist; all the movements of the elbow and shoulder could be performed. The muscles acting upon the elbow and shoulder were, however, still markedly paralysed, the movements which resulted from their contraction being very feeble and unsteady. The fingers and thumb of the right hand were rigid and bent into the palm. The right hand and forearm were swollen, and the skin felt sodden and was more moist than that on the opposite side. No distinct increase of the tendon reactions, as compared with those in the left arm and forearm, could be detected. There was absolutely no loss of power in the right leg, and the reflexes, both superficial and deep, seemed quite natural and equal in both lower extremities. There was no perceptible right-sided facial paralysis, but the patient, who had lost all his upper teeth, seemed to have some difficulty (probably not paralytic) in moving the upper lip on both sides. The skin sensibility was markedly impaired in the right forearm and hand, more especially over the fingers and on the outer (extensor) aspect of the forearm.

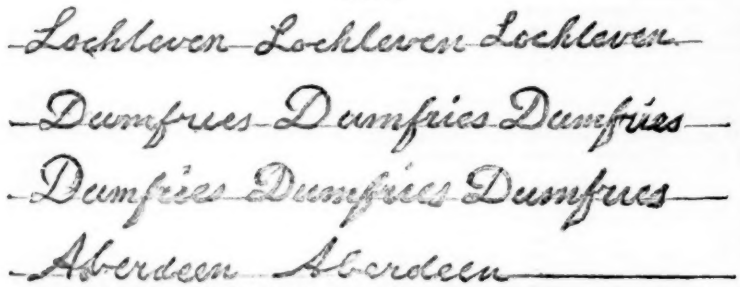
FIG. 8.



Perimeter chart of the fields of vision for white in Case 4, showing partial right-sided lateral homonymous hemianopsia, peripheral constriction of the whole of the left half of the field in the left eye (the parts to which the letters A and B point), and constriction of the upper part of the left half of the field in the right eye (the part to which the letter C points).

In the upper arm there also appeared to be some loss of tactile sensibility, but there was apparently no anæsthesia in the right leg. The exact testing of the skin sensibility was, however, difficult because of the inability which the patient had in expressing himself. The visual acuity seemed equal and normal in the two eyes. The pupils were equal and contracted both to light and to accommodation. No abnormal ophthalmoscopic appearances were observed. Perimeter measurements, made on March 11th and 12th, showed partial right homonymous hemianopsia, with some concentric limitation of the field in the left (seeing) half of each field (see Fig. 8). The hemianopsia was probably more marked than is shown in the figure, for the patient, who was very definite and certain in his answers when the left side of the field was being taken, was uncertain and hesitating when the right side of the field was being examined. The parts of the fields coloured black in the charts were absolutely lost. Hearing, taste, and smell, so far as they could be tested, owing to the aphasic condition of the patient, seemed equal and natural on the two sides. The heart seemed normal. The urine was very pale, and its specific gravity 1010; it was acid, not too copious, and contained no albumin. A high degree of aphasia was present. On analysis it was found to consist of very marked word-blindness, with apparently some degree of motor aphasia (amnesia) in addition. When the patient first came under observation I was doubtful if there were not some 'word-deafness' or lack of comprehensive (intellectual) power. When asked, for instance, on March 14th, whether he was a hundred years old he at once expressed emphatic dissent both by gesture, expression, and verbally, saying, 'Oh, no.' But when asked immediately afterwards if he was thirty he hesitated for some time and finally answered 'Yes.' Immediately after this he at once and emphatically said, in answer to questions, he was not forty and not fifty. This defect, if any, of intelligence in comprehending spoken language was, however, only temporary. Since March 21st I have not observed any mistakes of this kind. A more careful analysis of the speech condition at the time when the patient first came under observation showed the following facts.

FIG. 9.



Specimen of writing copied with the left hand by the patient whose case is described in the text.

"*Motor functions of speech; motor aphemia.*—The patient had lost the power of spontaneously speaking in sentences. He was also unable to name most common objects (such as a knife, pen, key, or pencil) which were shown to him, but he always knew what they were, and was at once able to repeat their names when they were mentioned in his hearing. He was able to make a few intelligent replies to questions in single words, and to use the words 'Yes,' 'No,' and 'Oh, no,' in an intelligent and propositional sense.

"*Agraphia.*—He had lost the power of spontaneously writing in sentences. He had also lost the power of writing from dictation. He was unable to write any letter of the alphabet when told to do so. He could, however, copy both printed and written characters with his left (non-paralysed) hand quite as well as most right-handed persons (see Fig. 9). He could also draw with his left hand at least as well as most right-handed persons (see Figs. 10 and 11). He knew the different parts of the house which he drew; and, although he could not himself name them, he at once pointed correctly to the different parts when they were named to him.

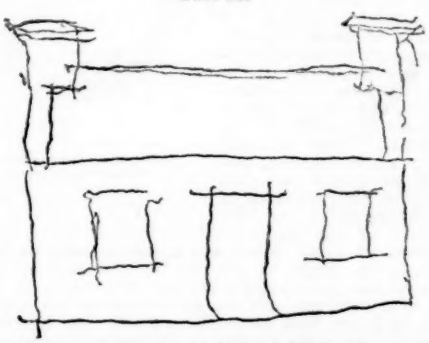
"*Sensory functions of speech.*—With the qualification mentioned above there seems to be no word-deafness. There is, however, very marked word-blindness. The patient is, as has been already mentioned, well acquainted with

FIG. 10.

Facsimile of drawing of a man's head made with the left hand by the patient whose case is described in the text.

ordinary objects (such as a knife, pen, pencil, &c.), which are shown to him, although he cannot name them spontaneously. He also at once recognises pictures and portraits (the Queen, Prince of Wales, Edinburgh Castle, the Scott Monument, &c.). He is, however, unable to recognise a single letter of the alphabet; he can neither spontaneously name the letter when it is shown to him, nor can he, when the names of different letters are repeated aloud to him, indicate when the particular letter which he is asked to recognise is named. He is also unable to recognise figures, either spontaneously or when they are named to him. On March 11th he was asked to name the letters and figures on a calendar for the month which was standing on my table. The result was as seen in Fig. 12. The letter O is the only one which was correctly named; the T (in THR.)

FIG. 11.



Drawing of a house made with the left hand by the patient whose case is described in the text. Drawing reduced from 4 to 2½ inches.

was correctly named, but in SAT. was named 'N'; the N in both SUN. and MON. was named 'T.' Numbers were on this occasion named as letters; 2 was called 'R,' 9 'N,'

and so on. At the same visit he copied the letters TUE correctly, but named them, after he had copied them, 'STH.' He also wrote from dictation, on the same occasion, 'T' for A, 'S' for B, 'R' for C, and when told to write D, E, F, said 'I cannot' or 'I do not know.' Efforts of this kind, and, indeed, any sustained attempt to speak, read, &c., were attended with marked flushing of the face, perspiration of the head, and appearance of great effort. The patient was advised to diligently practise his writing, and to try and read and learn the alphabet.

FIG. 12.

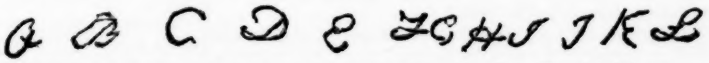
MARCH = NETOS				
SUN. = CST				
MON. = NOT				
TUE. = QSW				
WED. = TRN	2 = R	9 = N	16 = EU	
THR. = TRN				
FRI. = WXR				
SAT. = XRN	5 = T	12 = NX	19 = ON	

Copy of a portion of a calendar for March, 1887, showing the mistakes made by the patient (Case 4). The letters in the word March were read as "Netos," &c. (Same size.)

"*Subsequent progress of the case.*—His general condition and loss of speech slowly and gradually improved. Motor power was, to a considerable extent, regained in the muscles of the upper arm and forearm; the muscles acting upon the wrist and fingers have, however, remained until the present date, June 20th, absolutely paralysed. The swelling and moisture of the paralysed hand have almost disappeared. On May 18th spontaneous speaking in sentences was still lost; the patient could now name many more objects than when he first came under observation; and in replying to questions a few more words were made use of. He was still quite unable to write spontaneously or from dictation. He could not even write his own name, though he made, on this and several other previous occasions, more or less satisfactory attempts to do so. He was still, as a rule, unable to write any letter of the alphabet when told to do so. On June 1st, when he was shown to the Medico-Chirurgical Society of Edinburgh, he could not write or recognise the letters 'o,' 'a,' or 's,' which I wrote on the blackboard, nor did he know these letters when they were named to him. He had recognised these letters on a previous occasion; and I had more than once found that he could write and recognise some letters which, perhaps, at the next visit, or if he was tired or agitated, he seemed to be quite unacquainted with. He was now able to write some of the individual letters, such as 'a,' 'o,' or 's' when told to do so; and if he made a correct start, and wrote the letter 'a' from dictation, he was sometimes able to go on and to write many letters correctly and in their right order. On one occasion he got up to the letter 'p' in this way (see Fig. 13). He was, however, quite unable to read any letter after he had written it. He could not point out the letters 'a,' 'c,' 'o,' for instance, in the line of letters which he had written; and even when the letter to which his attention was being directed was correctly named to him he did not recognise that it had been named. In this respect (the power of spontaneously writing some letters which he was quite unable to read after he had written them) the case seems to resemble in an early stage the case of word-blindness described by Westphal, [1] in which the patient, at first unable to read his own writing, acquired the power of deciphering it by passing the tip of his index finger over each letter as if he were writing the word a second time.'

"Soon after the patient first came under my observation his wife, who always accompanied him when he came to see me, stated that he was able to read and make out some things which interested him in the newspapers. I paid very little attention to this statement, for it is well known that aphasic patients who are utterly unable to read a single word not unfrequently occupy themselves with a book, newspaper, or a paper, and appear to their friends to be intelligently interested. Knowing, then, that this patient was unable to read a single letter of the alphabet, I paid no attention to this statement. When, however, his wife stated on a subsequent occasion that he had, when walking in the cemetery, read to her the names (with which, be it observed, he had not been previously acquainted) on some of the tombstones quite correctly, and also that he had, on another occasion, turned up and pointed out in a guide-book the name of a

FIG. 13.

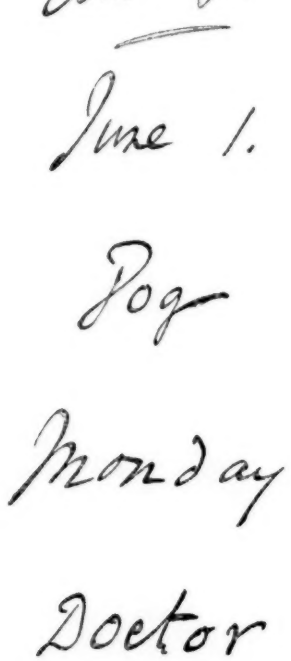


Facsimile of alphabet written by the patient (Case 4) on May 21st. The alphabet was correctly written up to the letter P. The patient was unable to read any of the letters after he had written them, and did not even recognise them when named to him.

[1] Quoted by Ross, Aphasia, p. 75.

landlord about whose property they were talking, my attention was aroused, and I found on investigation that the patient could read many words the individual letters of which he was totally ignorant of, even when they were named to him. Thus, on June 1st he read correctly the words which I had written on a piece of paper (see Fig. 14); also the

FIG. 14.



Facsimile copy of words read by the patient (Case 4) on June 1st. He was unable to recognise any of the individual letters contained in these words, even when they were named to him.

words 'house' and 'cat' written in the same way; 'book,' he said, was 'boot,' and 'something' he read as 'someone'; the words 'hand,' 'right,' 'left' he was unable to read. He was totally ignorant of the individual letters composing the words which he was able to read, and did not even know them when they were named to him. Thus he was asked with regard to the first letter in the word doctor, which he had read correctly, Is it 'a'? Is it 'b'? Is it 'c'? Is it 'd'? and he failed to give any sign that he connected the sound 'd' with the written symbol. And so on with all the other letters. His knowledge of figures was now better than it used to be, but still very imperfect.

"At the end of June, 1887, the patient's condition was essentially unchanged. I have had no opportunity of examining him since that time."

Corrigenda.—Case 3, page 950, seventeenth line from the foot, instead of "I am consequently" read "I was consequently."—Page 951, second column, seventh line from the foot, instead of "read it" read "tell me what he had written."

(To be continued.)

MEDICAL MAYORS.—Mr. William F. Prichard Bassett, M.D. Edin., M.R.C.S. Eng., has been re-elected mayor for the city of Bathurst, New South Wales.—Mr. A. Clarke Robinson, M.D. R.U.I., L.R.C.S. Edin., has been elected mayor of Jerilderie, New South Wales.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF MULTIPLE DUODENAL ULCER.

BY F. J. DE COVERLY VEALE, M.B., CH.B. VICT.,
LATE ASSISTANT MEDICAL OFFICER, COUNTY ASYLUM, LANCASTER.

THE following is a brief account of a case I had under my care in the early part of 1896

A man, aged sixty-eight years, of temperate habits, was admitted to the County Asylum, Lancaster, on Dec. 19th, 1895. Mentally he was advanced in senile dementia, wet and dirty in his habits, and he required a single room at night. He rapidly became feebler, and was transferred to hospital, but not put to bed. He at no time made any complaint of physical trouble, though his mental condition may account for this. He refused his food from about Feb. 10th, 1896, and had to be fed with a spoon. He was taking only soft foods, and was losing weight. On the 17th, about one and a half hours after breakfast, he vomited. This was thought to have been due to constipation, and a dose of salts was ordered. The vomited matter was said to be "bilious," but I did not see it. No further change was noticed until March 3rd. On this date the night attendant found that he had been vomiting "coffee-grounds." This was at 6 A.M. He was put to bed in hospital, and I was subsequently called to see him. He was very feeble and *in extremis* Nothing could be made out by examination. I inspected the vomited matter and suspected gastric ulcer, and treated him accordingly. During the day he became still feebler. He had two attacks of hæmatemesis during the night. He was also reported to have had two convulsive seizures, but not at the same time as the vomiting. He died at 5.15 A.M. on March 4th.

Necropsy.—In the first part of the duodenum there were four ulcers, all within two inches of the pyloric valve. The largest ulcer was of the size of a split pea, its edges showed considerable induration, and it involved all the coats of the bowel, the peritoneal covering being much thickened locally. The second ulcer was similar in size, but its edges were less indurated and it was more superficial. The remaining two ulcers were quite small, and merely involved the mucous membrane and submucosa. All these ulcers were deeply coloured by the deposition in them of disorganised blood products. The œsophagus and stomach showed similar deposits on their walls, whilst the fæces in both small and large bowels were almost black in colour from the same cause.

For the notes of the necropsy I am indebted to Dr. Goodliffe.

Lancaster.

NOTE ON A CASE OF SUPPOSED POISONING BY PENNYROYAL.

BY W. T. ALLEN, M.B., B.CH. R.U.I.,
RESIDENT MEDICAL OFFICER, PARISH INFIRMARY, LIVERPOOL.

A WOMAN, aged twenty-three years, was admitted to the parish infirmary, Liverpool, on March 15th, in an almost collapsed condition, suffering from symptoms of acute gastritis. She stated that vomiting began four days previously after she had taken a tablespoonful of pennyroyal. She had taken this drug to bring on menstruation, which had been in abeyance for six months. The excessive vomiting continued despite the usual remedies, but ultimately ceased under the influence of morphia and rectal alimentation. The patient, however, gradually sank, and died on March 19th. She had been an inmate of the infirmary for a week at the beginning of the month, and was then suffering from slight anæmia and dyspepsia, but had not vomited during that period.

A post-mortem examination was made at the direction of the coroner, and I found the stomach extremely congested, especially towards the cardiac end, the small intestines also showing thickening of their coat and intense congestion,

most marked in the lower part of the ileum. The large intestines were also congested even down to the rectum, but not to the same degree as the stomach or ileum. The uterus was normal in size, and there was nothing noticeable in the other organs except some congestion of the brain. At the inquest evidence corroborative of the woman's statement was given; but as the druggist who had sold the pennyroyal said that in thirty years' experience he had never heard of a case of poisoning by this drug, the jury returned a verdict that "death was due to gastro-enteritis set up by some irritant poison" but did not decide what the poison was. It is in deference to their verdict that I have put the word "supposed" in the heading to this note. On looking up the literature of the subject I have only been able to find one case of poisoning by pennyroyal, which is recorded in Dixon Mann's "Forensic Medicine." In that case a pregnant woman who was seen immediately after taking a one-drachm dose of the drug had vomiting, delirium, and opisthotonos, but subsequently recovered.

Liverpool.

A NOTE ON A FATALITY OCCURRING UNDER ANÆSTHETICS.

BY HUGHES REID DAVIES, M.R.C.S. ENG., L.R.C.P. LOND.

A CASE of left pleural effusion of many years' standing came under my care in 1889. From that date up to about the early part of 1896, except for occasional attacks of general debility, dyspnœa, and bronchitis, the patient managed to tide over year after year and follow his daily avocations without warranting surgical interference. However, a severe attack of broncho-pneumonia converted the fairly quiescent left thorax into an empyema. Bronchiectasis was also diagnosed; and, finally, when the pus found its way into the dilated tubes, the fœtor of the expectoration rendered life a burden, not only to himself, but to those around him. The misery of his life induced him to accept the offer of surgical aid. Every precaution to ensure success was taken. A well-known and skilful hospital surgeon was present, a physician, myself, and another surgeon. Chloroform was administered, the patient being gently lowered into as recumbent a position as his breathing allowed. The anæsthetic was taken well, the radial pulse being carefully felt by me, and the temporal by the anæsthetist. Neither pulse nor respiration were such as to warrant alarm. Stertor commenced, and the patient was announced by the anæsthetist as "ready." Then came our error of judgment, an error which THE LANCET, in the article entitled "The Records of Fatalities under Anæsthetics," published last week, shows to be common to others. Dorsal decubitus was exchanged for the right side position. In an instant a marked change occurred; a gurgling, bubbling effort of respiration was followed by complete cyanosis and cessation of respiration and heart's action. With the utmost rapidity the patient was turned upon his back, untouched by the surgeon's scalpel, and artificial respiration and subcutaneous injections of ether and brandy at once commenced, but though persisted in for some considerable time they were useless. Effect and cause seem plain. Up to the moment of turning the patient for operation anæsthesia was going fairly well. Simultaneously with the change from dorsal decubitus to right side position the empyema emptied itself rapidly into and through the dilated bronchi, filling the trachea, right bronchus, and even the mouth, as the "bubbling" in my case and the pouring of fœtid pus from the mouth in Mr. Scott's case testified. The change to the original dorsal position, artificial respiration, &c., quick as they were, were futile. The sound lung was choked, the embarrassed heart-action impeded beyond recovery, the respiratory centres responded no longer, and death from asphyxia resulted.

Surely, no one will say that the anæsthetic was to blame? and yet the case must be quoted as "death under anæsthetics." Had we but tried, before anæsthesia dulled the respiratory centres, the position required for operation, reflex coughing would at once have warned the patient and us of the impossibility of that position; or had we before anæsthesia withdrawn with a large trocar and cannula all the fluid possible from the pleural cavity we might, perhaps, have been spared our painful and much-regretted experience.

Bow, E.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF NEGLECTED TYPHOID FEVER; PERFORATION AND EXTRAVASATION OF FÆCES INTO THE SAC OF A LEFT INGUINAL HERNIA; DEATH AFTER RAPID EMACIATION.

(Under the care of Mr. W. G. SPENCER.)

THE following case is noteworthy on account of the exceeding difficulty in diagnosis and the great rarity of an intestinal ulceration due to typhoid fever perforating into a hernial sac. Extensive adhesions must have localised the peritoneal inflammation resulting from the perforation, or the patient could not have survived so long as a month after the perforation occurred, for perforation took place probably on Jan. 21st. The rapid wasting is remarkable considering that the site of the fæcal fistula was so close to the ileo-cæcal valve.

A man, aged thirty-eight years, last went to work on Dec. 22nd, 1896. He then stayed at home, complaining of pains all over him, and had shivering, sweating, and diarrhœa. He did not take to his bed, however, until Jan. 21st, 1897—i.e., a little more than four weeks after leaving work; he was then obliged to do so on account of great pain in the lower part of the abdomen. During three or four days he vomited several times yellow or brown matter; he wandered at night, and on two or three occasions had difficulty in passing urine. He had had a rupture on the left side for nine years, which used to come down when he was at work and go back on lying down; but after the attack of pain and vomiting it could not be returned, but, on the other hand, became more tense and caused much pain. He was admitted to hospital on Jan. 31st—i.e., about six weeks after leaving work—and his medical attendant is reported to have sent word that he was suffering from phthisis after influenza. A large swelling filled the left half of the scrotum and extended to the inguinal region, the skin over it being dusky red and œdematous. The swelling was tympanitic to percussion, yielded evident fluctuation, and was opaque to light, and a firm mass filled the inguinal ring and gave an impulse on coughing. The penis, the right side of the scrotum, and the perineum were normal. The temperature was 102·6° F. and the pulse was 130. The bowels were opened soon after admission. No vomiting had taken place for several days, nor did it occur before the operation. Mr. Spencer formed the diagnosis of a ruptured hernia and made an incision the whole length of the scrotum. Pus, fæces, and flatus escaped, and a mass of sloughing omentum was cut away without disturbing the adhesions shutting off the abdominal cavity. There was no bowel in the sac, but fæces welled up under the omental stump from a cavity just inside the ring. The sloughing hernial sac was treated antiseptically and frequently irrigated, and the sloughs, which included the testicle and cord, were later cut away piecemeal, so that before the patient's death a clean granulating surface had formed. For a few days the patient seemed to improve, but he soon rapidly wasted and was reduced to a skeleton before death. This wasting occurred in spite of the patient taking abundant food by the mouth and extras such as cream, alcohol, and cod-liver oil, which was also rubbed in. He was intolerant of enemata. The patient had regular motions per anum, and there were frequent discharges of fæces by the wound, sometimes yellow and sometimes green. Throughout the case there was an absence of odour in the fæces; the ward sister made the remark that the stools had the colour but not the consistency of typhoid stools. The abdomen was not palpated much for fear of breaking down adhesions; it was, if anything, rather retracted, always soft, and not tender, except one day when

there was some retention of pus. The patient's only complaint was of griping abdominal pains. The tongue throughout was moist and clean. The temperature fell after the operation and was subnormal for a week before death; the pulse was always from 100 to 120 or more. The patient died seventeen days after admission, about two months after leaving work.

Necropsy.—At the post-mortem examination, which was performed by Dr. Hebb, the omentum was found stretching from the colon to the left inguinal ring, thus forming an apron covering the lower half of the abdomen. Beneath it, in the pelvis, the lower portion of the small intestines had become matted together, mixed up with pus and fæces, with the gut so rotten that it tore in all directions when drawn upon. The oldest and largest perforation was situated just above the ileo-cæcal valve, but for four feet above the valve all the Peyer's patches were ulcerated down to the peritoneal coat or had actually perforated. The mesenteric glands were enlarged and the spleen was soft. Indeed, there is no doubt that the patient's illness was the result of typhoid fever.

SUSSEX COUNTY HOSPITAL.

A CASE OF TETANUS FOLLOWING PUNCTURED WOUND OF THE HAND TREATED BY BINIODIDE OF MERCURY BATH AND ANTITOXIN; RECOVERY.

(Under the care of Mr. N. P. BLAKER.)

THE interest in this case chiefly lies in the fact that the patient was treated by biniodide of mercury baths locally. When mixed treatment, however, is tried it is difficult to learn much for future guidance, and here the patient was given chloral and other drugs, besides having anti-tetanic serum injected. How far the use of the serum was of benefit we cannot judge; there is one thing established about its administration, and that is that the immunity which it confers is greatly superior to its curative qualities, and when the disease is once developed far greater quantities must be used than are necessary to induce immunity. "In summing up it seems to the author[1] that the serum treatment has not actually changed the prognosis in acute and serious cases. In the milder cases it seems to lessen the spasms, the pain, and the distress, and, fortunately, it has reduced the mortality, but to what extent cannot be told until we are certain that all cases are published." Kanthack[2] has pointed out that the severity of tetanus and the seriousness of its prognosis depend, among other things, upon the rapidity of the onset, the acuteness of the case, and the period of incubation—i.e., the shorter the incubation the more serious the outlook. For the notes of this case we are indebted to Mr. A. H. Buck, house surgeon.

A boy, aged fifteen years, was admitted into the Sussex County Hospital on June 12th, 1896, under the care of Mr. Blaker, on account of secondary hæmorrhage from a punctured wound of the palm of the hand. The wound was caused by a fall on broken glass in the road on June 8th, and was followed by free hæmorrhage, which was stopped by pressure. Hæmorrhage recurred on the 11th. At the time of admission there was in the middle of the palm of the left hand over the superficial palmar arch a clean deep cut half an inch long. There were then neither signs of inflammation about the wound nor yet signs of healing. No injury to tendons or nerves was discovered, and after washing with carbolic lotion a pad of cyanide gauze was applied. On the 13th the temperature was 100° F., and the hæmorrhage again recurred and was stopped by pressure. The temperature did not rise again above 99°, but on dressing the wound two days later there was a little pus present, after which it was dressed daily. On the afternoon of the 20th the patient complained of a stiff neck, and on examining him the house surgeon found he could not open his mouth or sit up in bed on account of rigidity in the muscles of the back. He was moved at once to a separate ward, which was darkened and kept quite quiet, and under chloroform the wound was opened up freely with a pair of dressing forceps. The hand and forearm were then put into a bath of biniodide of mercury of the strength of 1 in 500. Internally fifteen grains of chloral hydrate were given every four hours. On the 21st, at 8 A.M., the patient had a severe attack of opisthotonos and was sick. Swallowing became so difficult that nasal feeding was resorted to. The chloral was discontinued, and ten minims of tincture of opium were administered every four hours. Some improvement took place during the day, but at any stimulus, such as noise or draught, the spasms recurred. Twitchings of the face were also troublesome. Towards night the patient could swallow more easily and was fed with a spoon, the teeth not admitting of separation for more than a quarter of an inch. In the evening the temperature was 101° F., the pulse was 120, and the respirations were 20. On the afternoon of June 20th a telegram was sent to the British Institute of Preventive Medicine for tetanus antitoxin, but late at night an answer was received saying that there was none in the institution. On the 21st (Sunday) telegrams were despatched to two firms of druggists, both of whom sent off antitoxin on the 22nd (Monday) as soon as their premises were open. The use of antitoxin was, however, delayed for nearly forty-eight hours, at which time, as it happened, the symptoms were already showing signs of abating. On the 22nd the patient was better, after a fairly good night. The rigidity of the muscles of the back was well marked and there were also trismus and risus sardonicus. There were no acute spasms. There was slight nausea, but no vomiting. The patient was quieter and in less pain. The left hand had been in a bath of biniodide continuously since the symptoms were first noticed, and the palm and dorsum presented large blebs. Considerable absorption must have been taking place. At 12 midday a dose of antitoxin was injected subcutaneously in accordance with directions sent with the bottle. At the time of injection the temperature was 100°, and during the following twenty-four hours it did not rise above 100·8°, nor did the pulse exceed 122. On the 23rd the spasms were few in number, but the back was still very rigid. The trismus and risus sardonicus were well marked. The patient could swallow better. A second dose of antitoxin was administered at 11 A.M.; the temperature rose to 101·4° twelve hours later; otherwise it remained between 100° and 101°. He slept fairly and had taken food well—three pints of milk, three ounces of brandy, and six eggs during the last twenty-four hours. The strength of the bath of biniodide was now changed to 1 in 2000. During the afternoon the opisthotonos and twitchings were more severe. The strength of the bath was again changed in the evening to 1 in 500. On the 24th the patient was better as to pain and spasms. The bowels were opened after an enema. Slight salivation appeared towards the evening, and the biniodide bath was changed for boracic fomentations. Some of the blebs had broken and others were still of large size. On the 26th there were considerable pain and twitching of the face and muscles of the back. The hand was put in the biniodide bath (1 in 500) for half an hour. The temperature remained at from 100·6 to 101·6°. After this the symptoms slowly and gradually improved and the bath was given for from one to two hours a day. On the 30th the tincture of opium was diminished to four minims every four hours, and on July 9th to three minims, and on the 12th to two minims, being discontinued altogether on the 15th. On the 18th the bath was discontinued, and the patient could then turn about easily in bed and sit up. On August 1st the curve in the upper dorsal region was somewhat exaggerated, and there was still slight rigidity of the muscles of the back. The intercostals did not act well and the breathing was mainly diaphragmatic; the patient was, however, looking very much better and was getting out of doors. The trismus had disappeared. On the 15th the above condition had very much improved, and the patient left the hospital practically well eight weeks after the appearance of the first symptoms.

Remarks by Mr. BUCK.—The following points seem to me to be of special interest in connexion with the above case, and have induced me to place it on record:—1. There is, so far as I know, no recorded case of the treatment by a bath of biniodide of mercury having been tried. An acute case of tetanus successfully treated by subcutaneous injections of corrosive sublimate has been reported by Celli.[3] Biniodide was used in preference to sublimate on account of its non-precipitation with albumin, which rendered its absorption more easy and certain and ensured the cessation of such absorption as soon as desirable; whilst the sublimate forms a store of more insoluble albuminate of mercury

[1] Sajous: Annual of the Universal Medical Sciences, vol. iii., 1896, M. 7.
[2] Medical Chronicle, 1895.
[3] Archivio Italiano di Pediatrica, 1894, Medical Annual, 1896.

in and about the wound, which might continue to enter the system after symptoms of mercurialism had appeared. The strength of the solution used (1 in 500) was such as to produce blebs of considerable size in thirty-six hours, but no signs of salivation or soreness of the gums were observed for four days. These symptoms speedily disappeared with the cessation of the bath for thirty-six hours. After this the hand was immersed for from one to two hours daily for three weeks, and there were no further signs of mercurialism. 2. The administration of the bath was quickly followed after the first twenty hours by great amelioration of the symptoms, and if afterwards these at any time became more severe the use of the bath was noticeably followed by relief. The fact that the absorption of the biniodide took place by the same paths as the absorption of the poison may have had something to do with this, and in cases where the infected wound is in such a part of the body that it cannot be treated by a continuous bath subcutaneous injections of a solution of biniodide might be tried in the neighbourhood of the wound or even into the wound itself. 3. Owing to the delay in obtaining the antitoxin the first injection did not take place till forty-eight hours after the appearance of the symptoms, by which time the boy had considerably improved. There was no apparent reaction after either injection. 4. The period of incubation, twelve days, was of average duration and might precede an acute or chronic attack; the symptoms were, however, alarming within twelve hours of their onset. It was remarkable how little inflammation was present about the wound during the first twelve days. The case was throughout treated under the supervision of Mr. Blaker, and I am indebted to his kindness for permitting me to publish it.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Actinomycosis of the Pleura and Chest Wall.—Cyst of Omentum.—Concretions of the Rectum.—Traumatic Hydrocephalus.—Infective Venereal Tumours in Dogs.—Tuberculous Peritonitis associated with an Inguinal Pouch of the Peritoneum.—Healthy Œsophagus Ruptured by Vomiting.

A MEETING of this society was held on April 6th, Mr. EVE, Vice-President, being in the chair.

Dr. SAMUEL WEST showed a case of Actinomycosis of the Pleura and Chest Wall. The specimen was removed from a boy, aged six years, who was admitted as a case of empyema. He had been ill for nine weeks with pain in the chest and shortness of breath, and a few days before admission a fluctuating swelling had formed in the fifth left intercostal space. This was incised, and a small quantity of thick pus escaped, which was examined by Dr. Kanthack and found to contain actinomycotic filaments. Two weeks later another swelling formed in the chest wall, which was also incised; it did not appear to communicate with the pleural cavity. The sinuses continued to discharge, and two months later iodide of potassium was given in increasing doses till thirty grains per diem was reached. There was at once a marked improvement, and it seemed that the child might recover, but he died unexpectedly during the administration of chloroform for the extraction of a tooth, although he had previously taken it well on two occasions. At the necropsy the left lung was found completely collapsed, and the pleural cavity was filled with cheesy material and collections of pus. The chest wall was much thickened, the ribs, which were unaffected, being embedded in dense fibrous tissue in which a very few actinomycotic groups could be found after careful searching. No deposits were found in the lungs. The case was remarkable on account of the age of the patient, of the escape of the lung, and of the striking improvement under the administration of iodide of potassium.—Dr. EDMUND GREEN mentioned a case of disseminated actinomycosis in a boy, fourteen years of age, who had first a swelling across the lower part of the abdomen, which was opened, and later another over the ninth costal cartilage, and a third in the left inguinal region. The fungus was found in the pus, and iodide of potassium administered with temporary success, but now the patient was going down hill.—Mr. CECIL BEADLES mentioned a case of actinomycosis of the mamma, in which an abscess was opened, and was found to communicate with the interior of the thorax by a sinus which could be tracked down the thorax to the region of the liver.—Dr. A. F. VOELCKER had performed a post-mortem examination on a case which had been under treatment for some time for actinomycosis of the skin. The lower lobe of the lung was firmly adherent to the chest wall by dense fibrous tissue as in Dr. West's case, and in the liver there was a cicatrised patch of actinomycosis. There was also double psoas abscess, the pus containing actinomycetes, and there was amyloid disease of the liver and other organs. There had been temporary improvement under iodide of potassium.—Mr. EVE said that iodide could not be looked on as a specific in this disease. It was a curious fact that it was often most difficult to find the fungus in cases in which there was a large quantity of diseased tissue present.

Mr. HARRISON CRIPPS showed a Concretion removed from the rectum of a woman sixty-three years of age. She had suffered from almost constant diarrhœa, but had not had hæmorrhage. The concretion was removed by dividing the posterior wall of the rectum and extracting with a scoop. It weighed nearly half a pound, and was composed chiefly of carbonate of magnesium. No nucleus such as a gall-stone could be found. Careful inquiry failed to bring to light any article capable of producing the concretion in the previous diet of the patient, and she had taken no magnesia medicinally.—Dr. ORD showed some fragile calcareous concretions passed from the bowel by a patient. The abdomen was explored, but nothing was found but a dilatation of the sigmoid flexure. Dr. Ord also showed a calcareous concretion removed from the rectum of the guanaco.—Mr. W. G. SPENCER said that he had removed a similar concretion, which was composed of a nucleus of vegetable matter surrounded by many layers of calcareous material.—Dr. VOELCKER suggested that the calculi shown by Dr. Ord might have originated in the pancreas.

Mr. HARRISON CRIPPS exhibited a specimen of Cystic Degeneration of the Omentum which was removed from a woman. It was found unexpectedly during an operation for recurrent appendicitis. The omentum was converted into a cystic mass, and was removed through the wound, when it resembled a bunch of white grapes. No evidence of hydatid disease could be found, and he thought that the cysts were due to dilated lymphatics. They were lined by columnar epithelium.—Mr. EVE referred to a specimen in the Museum of the Royal College of Surgeons of England in which there were similar cysts lined by columnar epithelium. He agreed that they were probably dilated lymphatics, and similar to the dilated lymphatics containing chyle that were occasionally met with in the mesentery.

Mr. JAMES BERRY showed a specimen of Cystic Degeneration of the Great Omentum discovered accidentally when making a post-mortem examination of a woman who had died in St. Bartholomew's Hospital from carcinoma confined to the rectum. The peritoneum in most parts was healthy, but the presence of a few adhesions here and there in the abdomen indicated slight peritonitis at some bygone period. The great omentum presented a very remarkable appearance; it was much atrophied and contained no fat. It was represented mainly by a network of slender fibrous bands passing from the transverse colon to the sigmoid flexure, to which they were firmly adherent. Connected with these bands, lying between them and hanging from them, were numerous cysts or vesicles, all of which had exceedingly delicate and perfectly transparent walls and contained a pale yellow, slightly viscid fluid. The shape and size of the vesicles varied considerably, from the size of an egg to that of a pea. Most of the vesicles were at one end quite free, while at the other they were attached to the rest of the omentum by a narrow stalk. Mr. Berry was unable to offer any decided opinion as to the nature of the disease in his specimen, but from the exceeding delicacy of the cyst walls and from the tubular nature of many of the cysts he was inclined to believe that the cysts might be regarded as distended lymphatic vessels.

Mr. G. B SMITH and Dr. J. W. WASHBOURN described a series of Infective Tumours occurring in the Genitals of Dogs. A dog affected with a tumour on the penis served twelve bitches, of whom eleven became infected. Three of these bitches were then served by a second dog, who subsequently developed a growth on the penis. After becoming infected this second dog served two healthy bitches. One of these bitches developed a growth in the vagina while the other remained unaffected. A dog which was artificially

inoculated on the penis developed a growth similar to those in the above series. The tumours commence as minute translucent papules which grow slowly, and at the end of about twelve months are converted into lobulated masses. At a late stage the vagina may be filled with lobulated masses, which protrude from the vulva and distend the perineum. In the majority of cases there was no deep induration, and the tumour was readily removed from the subjacent structures with the mucous membrane to which they were attached. In two cases in which a post-mortem examination was made there was infiltration of the muscular wall of the vagina, and in one of these cases the lymphatic glands in the groin were affected. The microscopical structure of all the tumours examined was identical. It consisted mainly of cells of a rounded or polyhedral shape, in the latter case giving at first sight the impression of an epithelial new formation. A careful examination, however, proved that the cells were not derived from epithelium The stroma varied considerably in different growths, sometimes being scanty and sometimes relatively abundant. In the latter case the cells were enclosed in irregular alveolar spaces. There was nothing in the microscopical appearance of the tumours to distinguish them from the sarcomata met with in the human subject. The tumours were not due to irritation produced by discharge. In fact, in the majority of cases there was no discharge whatever either at an early or a late stage of the disease. There was no tendency to spontaneous cure; but when the tumours were completely removed at an early stage they did not recur. Attempts to infect rabbits and guinea-pigs failed. In two cases the tumours were successfully transplanted to the subcutaneous tissue of dogs. In conclusion, Mr. Smith and Dr. Washbourn gave reasons for believing that the tumours were of a similar nature to those described by Geissler, Wehn, Duplay, and Cazin in their work upon the infective nature of cancer. They had not yet been able to get conclusive results from cultivations from the tissues

Mr. CECIL BEADLES showed a specimen of Tuberculous Peritonitis associated with an Inguinal Pouch of the peritoneum, which was taken from the body of an imbecile old woman who had symptoms of strangulated hernia. On operation an inguinal pouch was found filled with pus. The sac contained no bowel, but there was a mass which was either thickened Fallopian tube or broad ligament. The bowels were all matted together and drawn over to the right side of the abdomen.

Dr. JOHN FAWCETT showed a specimen of Hydrocephalus, with blocking of the posterior end of the aqueduct of Sylvius which was apparently the direct result of a blow on the head.

Dr SAMUEL WEST and Dr. F. W. ANDREWES exhibited a specimen of Rupture of a Healthy Œsophagus caused by Vomiting. The patient was a man fifty-five years of age, who was brought to hospital for acute pain referred to the left side of the chest and persistent vomiting. After death a long rent three inches in length was found in the posterior wall of the œsophagus near the cardiac end. There was dark fluid in the posterior mediastinum as high as the root of the lung and in the retro-peritoneal tissue below the diaphragm as far as the pancreas. There were also collections of brown fluid between the base of each lung and the diaphragm. There was no sign of previous disease of the œsophagus, and the rupture appeared to have been directly caused by the vomiting.

SOCIETY OF ANÆSTHETISTS.

A New Anæsthetic Inhaler—Occurrence of Pneumonic Conditions after the Administration of Anæsthetics.

A MEETING of this society was held at 20, Hanover-square W., on March 18th, the President, Mr. G. H. BAILEY, being in the chair

Professor HOLIDAY (of the Royal Veterinary College) exhibited a NEW ANÆSTHETIC INHALER. The first apparatus, which was made for him by Messrs. Arnold and Sons of West Smithfield consisted of a small bottle with a wide neck, to which was fitted a cork bored for the passage of two tubes. One tube, at the lower extremity of which was fitted a valve to prevent egress, allowed admission of air which passed over the chloroform in the bottle and took up vapour in its course, the other was for the exit of a mixture of air and vapour. To the latter tube was attached the extremity of a pair of rubber bellows, the action of which was to send vapour from the bottle and force it on towards a mask which fitted the patient's face. The amount of anæsthetic vapour admitted into the mask was regulated by a tap placed in the lower portion and by pressure upon the ball. In a room at a temperature of 60° F. with 6 drachms in the bottle, when the bellows were worked as much as possible there passed out of this at each pressure about two-fifths of a minim of chloroform vapour well mixed with three and a half ounces of air, thus giving a proportion of one part of chloroform vapour to 4200 parts of air. This proportion could be still further diminished to 1 in 8000 or even much less by having a mask with an open end (such as he used for the dog) or by putting a less amount of chloroform in the bottle at the commencement. The second apparatus was so devised that it forced a certain amount of air over the surface of the chloroform in the bottle, the proportion in this case being approximately (when six drachms were in the bottle and the room was at a temperature of about 60°) one part of chloroform vapour to 3000 parts of air, the apparatus sending out about half a minim of vapour at each pressure of the ball. This latter apparatus thus occupied a middle place between the first and Junker's (which forces air through chloroform). The advantages were that the chances of death from overdose were minimised (the strength of vapour and amount allowed to be inhaled could be regulated to a nicety), there was no fear of irritant or rubefacient effects on the face of the patient, the chloroform was less likely to become oxidised or otherwise changed (as may take place when air is bubbling through it), and also that the amount taken up from the surface was more constant than when air is forced through an ever-diminishing quantity of the fluid. In the case of the dog alone Professor Holiday said they had records of over 300 consecutive cases in which either one or other of the apparatus had been used without a single death which could be attributed to the chloroform, and in only three cases had they had to resort to the antidotal measures of hydrocyanic acid and artificial respiration. Recovery, too, was always tolerably rapid and unaccompanied by the nausea and depression which he had seen after administrations by the open methods. For the trial in human practice of the first form of apparatus Professor Holiday was indebted to several gentlemen, particularly Dr. Dudley Buxton, who kindly tested the first one which was made. All the gentlemen to whom he had submitted it spoke favourably upon its merits for children, parturition cases, and prolonged operations, but for adult men the vapour was apparently too much diluted. He was hoping, however, that the second form of apparatus would get over this difficulty and at the same time retain all the advantages.—Professor HOLIDAY also showed an arrangement for Passing Compressed Air from an Iron Bottle over the Surface of Chloroform for use either with the above or a Junker's inhaler.

Dr. SILK then introduced a discussion on the Occurrence of Pneumonic Conditions after the Administration of Anæsthetics, a *résumé* of which was published in THE LANCET of March 20th.—Mr. RICKARD LLOYD remarked that in consequence of the seeming opportunity for the spread of disease afforded by the repeated use of the uncleansed bag of Clover's small inhaler, he suggested in THE LANCET of May 28th, 1887, the use of a new or a thoroughly cleansed bag for each patient. The new bags appeared to be too expensive for general use. Messrs. Maw, Son, and Thompson made them of rubber at 9*d*. each, and Messrs. Barth, more successfully, of prepared paper, at 3*d*. or 4*d*. each. A week or two ago the latter firm thought it possible to produce the bags much cheaper. It had often occurred to Mr. Lloyd that more might be done to protect patients from possible chill about the time of operation and in the wards afterwards, as the risk of simple inflammation of the respiratory passages was greatly increased, if not solely induced, by this, and specific bacilli would find it a great auxiliary in the production of disease. He read extracts from the notes of Mr. C. H. Wilmer, house physician at the West London Hospital, of a case in which bronchitis, followed by left lobar pneumonia and left pleurisy with effusion, developed successively from the time of operation for removal of a broad ligament cyst in a pale, delicate-looking woman, twenty-four years of age. She ultimately recovered. There were no other cases occurring about that time in the hospital; and, indeed, bronchial irritation calling for treatment was in his experience rare, while he was unacquainted with any case of

pneumonia attributed to an anæsthetic, and the case cited was not apparently of specific origin.

ÆSCULAPIAN SOCIETY OF LONDON.

Exhibition of Cases and Specimens.

A MEETING of this society was held on April 2nd, Mr. STEPHEN PAGET, President, being in the chair.

Dr. R OSTLERE showed a man with red-brown Discolouration of the Skin of the Face and Forearms suggesting sunburn or Addison's disease, but really consequent on chronic eczema. The patient was an in-door worker. His general health was good and as far as was known he was free from constitutional taint.

Dr. L. U. YOUNG showed a case of large Intra-peritoneal Abscess with Visceral Fistulæ. This patient, a girl aged twelve years, had also been under the care of Mr. S. Paget and Mr. H. J. Waring. She came first under treatment with the abscess, which was believed to be tuberculous, discharging at the umbilicus. This was freely opened up and found to be intra-peritoneal and to communicate with an opening in the ascending colon. Later, a similar vesical fistula was also discovered. The colic fistula was converted into an artificial anus and the patient's general condition had since then much improved. No fæces had passed per anum for three months.

Mr. W. C. M'DONNELL showed a case of Lead Paralysis in a man who had nearly recovered under glycerine-tannate of iodide of potassium and Faradism.

Mr. S. PAGET showed:—1. A case of Lupus Infiltrating the Pinna of the Ear in a boy. 2. A case of Hermaphroditism in a child aged nine years. The penis was adherent along its entire under-surface dividing the scrotum into two pseudo-labia. The urethra opened at its base like a small vagina, coming out under the pubic arch. The testes were undescended. 3. A case of Well-marked Genu-valgum in a man almost amounting to Dislocation of the Knee-joint. (Both of these cases were under treatment in the Metropolitan Hospital).

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Epidemic of Small-pox at Gloucester.

A MEETING of this society was held on March 29th, Dr. G. P. BATE, President, being in the chair.

Dr. JOHN CAMPBELL read a paper on the recent Epidemic of Small-pox in Gloucester, of which city he was the medical officer of health. The population, he said, was about 41,000, of whom very few adults had ever been re-vaccinated, and since the guardians ten years ago ceased to enforce the Acts the great majority of the children, forming probably nearly a fourth of the inhabitants, had remained entirely unprotected. Indeed, the anti-vaccinationists boasted that Gloucester was the least vaccinated town in England and had enjoyed immunity from small-pox for twenty years. The death-rates for the three years preceding the epidemic had been 20·17, 15·34, and 18·46, and the zymotic rates 2·17, 1·29, and 1·65; while deaths from typhoid fever were few. So far from the epidemic being due, as the anti-vaccinationists alleged, to defective drainage, overcrowding, and insanitary conditions, the small-pox originated in, and was almost confined to, a district where the sewerage was excellent and the density of population 31·41 to the acre, but where there was the largest proportion of children nearly all unvaccinated; and the reason why it did not extend to the poorer, ill-drained districts, with 64·3 inhabitants to the acre, was obviously that so soon as the outbreak in the better part of the town assumed alarming proportions the panic-stricken people of the other districts crowded to the vaccination stations in thousands. The first cases occurred in June and July, 1895, but were concealed, no medical man being called in; others derived from these were notified in August and promptly removed to the hospital, the houses being disinfected, but others, described as measles, escaped notification. By the end of the year 26 cases had been notified, and probably as many concealed. The hospital accommodation was inadequate and no means existed for the disinfection of bedding. In January, 1896, the sanitary authority awoke to a sense of the danger, but the guardians, supported by an active anti-vaccinationist propaganda, remained passive for some time longer. The notifications, some dual, in January were 41, in February 150, in March 518, in April 783, in May 367, in June 112, and in July 23, after which there were no more. In February Dr. Bond, supported by Dr. Sweeting from the Local Government Board, brought the guardians to a sense of their duty. A Lyon's disinfector was set up, hospital accommodation was extended, and the additional vaccinators appointed by the sanitary authority were taken over by the guardians and placed under the supervision of Dr. Bond. Only 742 cases were received in the hospitals, the rest having been treated at home. There were 710 cases under ten years of age, of whom 23 had been vaccinated and 687 were unvaccinated. Of the former none, of the latter 278 died. Between ten and twenty years of age there were 309 cases; 260 vaccinated in infancy with 9 deaths, and 49 unvaccinated with 13 deaths. At ages above twenty there were 925 attacks, 889 vaccinated with 99 deaths, and 36 unvaccinated with 15. There were also 35 cases occurring in persons who were said to have been vaccinated in infancy, but who showed no marks; they were therefore practically unprotected, and 15 of them died. Not one of the nurses engaged in the hospitals or on the district staff was attacked, all having been successfully re-vaccinated, but all of those in the service of Mr. Pickering, an anti-vaccinationist, contracted the disease except one, who, having been previously on the hospital staff, had been re-vaccinated there. Of the 200 deaths occurring in the hospital 127 were of unvaccinated children under ten years of age, and the total mortality among patients of that age was 64 per cent., or nearly double what it had been in the previous epidemic, when a larger proportion of the children had been vaccinated.

A short discussion followed, in which Dr. SEATON, Dr. GWYNN, and the PRESIDENT took part.

Reviews and Notices of Books.

A Manual of Chemistry. By WILLIAM A. TILDEN, D.Sc., F.R.S., Professor of Chemistry in the Royal College of Science. London: J. and A. Churchill, Great Marlborough-street. 1897. Price 10*s*.

IT is a strong proof of the rapid progress which has been made in chemical science—and especially that part dealing with the inorganic elements—during the last quarter of a century that in the familiar work before us, which is based upon Fownes' original manual, revision has necessitated the re-writing of a large part of the existing matter and the addition of a considerable amount which is new even to the edition of it by the late Henry Watts. To Dr. Tilden's lot it has fallen to remove the last traces of the work of Fownes. We are glad, however, that he has found it possible to preserve the original form of the old manual. On turning over the pages without reference to its title chemists will observe at once the form and style of the old text-book which was their true and faithful companion in the days long since gone by. The book, of course, is brought well up to date, as instanced in the references to the work of Professor Smithells on the structure of flame; to Professor Clowes's new and ingenious method for the detection of inflammable gas in the air of coal mines; to the work of Professor Dewar and of Professor Olszewski on the liquefaction of oxygen, air, and hydrogen; and to the discovery of argon and helion by Lord Rayleigh and Professor Ramsay. Dr. Tilden has wisely added an introductory chapter on the most important historical events in the development of chemistry from the time of Boyle. Such a preface cannot but prove to be useful to the chemical student. The plan of the original work is also preserved. Thus the mathematical side of the science is deferred until the student is made familiar with the chemistry of the non-metallic elements and the facts concerned. On page 232 he commences the study of the principles involved. As we have indicated, the book is an admirable lecture and laboratory companion. We presume the present volume will be followed

by a second devoted to organic chemistry. In Fownes's manual both sections were dealt with in one volume, but in Watts's edition the book was divided into two volumes. We can gather no indication in the present volume that a second volume on organic chemistry is in preparation, although surely it would be justified since Dr. Tilden, in the preface, remarks, "This book is not intended for children." And organic chemistry is not an easy subject.

Lectures on Renal and Urinary Diseases. By ROBERT SAUNDBY M.D. Edin., F.R.C.P. Lond. Second edition. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1896. Price 10*s.* 6*d.* net.

IN this volume Dr. Saundby has included the substance of his two monographs on Bright's Disease and on Diabetes, with considerable revision and addition. The result is a work which embraces questions of great pathological moment that have for long received much attention in the scientific world; and it is the product of one who has devoted especial care to the study of these subjects. The author is particularly mindful to assign credit for observations and opinions stated in the text, each chapter having appended to it a list of bibliographical references that prove the width of his reading and his anxiety to present the questions according to their most recent developments. A preliminary chapter on the Anatomy of the Kidney is followed by chapters on the Pathology of Albuminuria and on Dropsy. As regards the former we commend for particular notice by medical officers to insurance companies the statements that "albuminuria may be present in healthy persons for long periods without causing any derangement of the general health or of the structure of the kidneys," and that "albuminuria *per se* should not be regarded as an insuperable objection to life insurance." The present standpoint of the Pathology of Uræmia is well explained in the almost too brief exposition given in Chapter VII. A separate chapter is devoted to Retinal Changes in Renal Disease. Dr. Saundby's classification is suggestive and is based on etiological grounds. By it he divides the various forms of Bright's disease into (1) infective nephritis, comprising all cases due to infectious diseases, and including, therefore, most cases of acute parenchymatous nephritis, of chronic fatty kidney, and many of typical granular kidney; (2) toxic nephritis, which largely consists of cases of red granular kidney ("lithæmic" nephritis, as he elsewhere calls it) that occasionally, owing to intercurrence of acute attacks, may become enlarged and fatty; and (3) obstructive nephritis, that needs no explanation. This classification, though scientifically justifiable, yet has the drawback of referring anatomically similar lesions to separate heads. Lardaceous disease is kept apart, as it is not entitled to rank as a form of nephritis or Bright's disease. The chapters on Diabetes are full of interest, and on the whole they strike us as being more pervaded by the results of the author's personal observations than the other sections do. Nothing can be better than the descriptions given of the morbid anatomy of diabetes mellitus or the careful exposition of its clinical history, whilst the interesting subject of diabetic coma is amply and clearly discussed.

The Essentials of Chemical Physiology. By W. D. HALLIBURTON, M.D. Lond., F.R.S. London: Longmans, Green, and Co. 1896. Price 5*s.*

THE fact of a second edition of this essentially practical work being called for is evidence of its usefulness, especially as it differs little from the previous edition except in respect of the record of some recent advances and some small revision to increase its instructional value. It affords a handy companion for the use of students working at the physiological bench. Its contents amount to a series of lessons comprising an elementary and an advanced course. Each lesson is prefaced by practical directions for the experimental verification of the facts which are subsequently described. The tests thus enumerated bear the stamp of practical proof. In the appendix several well-known forms of physiological apparatus are described. We do not, however, find any mention of the application of Lovibond's tintometer to the estimation of the corpuscles and the colouring matter of blood. In a course of physiological chemistry such a book as this is indispensable.

LIBRARY TABLE.

Toxicology. Edinburgh: E. and S. Livingstone. Price 1*s.*—The interrogative method of teaching a subject is useful enough because, perhaps, it leads the student to think a little more than he would by merely reading. The little production before us is one of the catechism series. It is concise, to the point, and correct, but would have been improved if a little more system had been adopted in the arrangement of subjects. Of course, the book is not one for reference, but for rudimentary instruction; all the same, it would have been better if some sort of division had been made between the facts regarding one poison and those regarding another.

A Course of Practical Chemistry for Medical Students as Prescribed by the Conjoint Board. By CHAS. FREDERICK BAKER Lecturer on Chemistry in Mason College, Birmingham. Birmingham: Cornish Brothers. 1896. Price 2*s.* 6*d.*—This book presents the usual deficiencies of those intended exclusively for examinational purposes. It is written within very close limits of the requirements of the primary chemistry examination of the Conjoint Board. Any modification that the Board of Examiners may choose to adopt will therefore soon render it valueless. As it is, the information given in regard to the specific reactions of a salt, with a view to detection, is distinctly meagre. The methods given for the preparation of various compounds are good and intelligible.

Chemical Notes and Equations. By G. H. GEMMELL, F.I.C., F.C.S. London: Baillière, Tindall, and Cox. Price 5*s.*—The student of medicine attending chemistry lectures for the first time frequently finds it useful to have recourse to a small book which will refresh his memory in regard to the facts he has had brought before him. The book before us supplies such a want, dealing, as it does, with brief notes on the various subjects, to which are added the principles involved in chemical changes and the equations representing them. It is impossible, however, to overlook a specimen of slipshod writing which is calculated to instil wrong ideas. Thus for the symbols of carbon, oxygen, sodium, and silver the author writes a mixture of wrong and hypothetical formulæ as follows: C_3 O_4 Na_2 Ag_2. We believe we are in agreement with the highest chemical authorities when we state that the number of atoms in the molecules of carbon and sodium, for example, and their molecular weight are not known with the certainty which this would imply.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The spring meeting of the South-western Division of this association is to be held at Barnwood House, Gloucester, at 2.45 P.M. on Tuesday, the 27th inst. Dr. Soutar invites the members to luncheon at 1.30. After the election of members and the transaction of business a discussion will be opened by Dr. Soutar on Recoveries in Asylums, to be followed by a paper by Dr. Goodall on the Systematic Collection of Anthropometrical Data in Asylums. The members will dine together at the New Inn Hotel at 5.45 P.M.

THE RESPONSIBILITIES OF PUBLIC BODIES.—Under this heading in THE LANCET of March 6th we recorded judgment at the Hants Assizes in favour of a gentleman living at Bournemouth, whose garden was overflowed with sewage from a drain of insufficient capacity. The matter has since been taken to the High Court, where Mr. Justice Vaughan Williams has confirmed the decision of the court below, giving judgment for the plaintiff on the findings of the jury.

Analytical Records
FROM
THE LANCET LABORATORY.

NEW TABLOIDS.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, E.C.)

INTERESTING additions to the useful list of tabloids have recently been made in the following:—Tabloids of stypticin for administration both hypodermically and by the mouth in doses of one-quarter and three-quarters of a grain. Stypticin is the name given to hydrochloride of cotarnin, an oxidation product of narcotine; it appears to be allied in its therapeutic action as well as in chemical structure to hydrastinin, but as a uterine hæmostatic it is said to possess distinct advantages, since it is also sedative in its action. Eucaine hydrochloride is prepared in soloid form for the convenient preparation of a standard solution of the salt for producing local anæsthesia. Its action is similar to cocaine, but without its objectionable toxic effects. Tabloids containing five grains of trional are convenient for the administration of this comparatively new hypnotic. (As pointed out in a paper read before the Clinical Society by Dr. Rolleston and reported in THE LANCET of March 27th, the administration of this drug may lead to excessive urobilinuria.) An equally rapid hypnotic is tetronal, which is suitable, it is said, for prolonged administration. Further useful combinations in the form of tabloids are as follows: Quinine salicylate tabloids containing three grains of the salt which has been prescribed for influenza and in the treatment of rheumatic gout (the salt is insoluble in water, but readily breaks up in a slightly acid medium); compound bromide tabloids, containing the bromides of sodium, strontium, and ammonium, with a small quantity of arseniate of soda to obviate acne; codeine tabloids, containing each half a grain of the alkaloid; mercury with chalk and opium tabloids, for use in syphilis; blue and compound rhubarb tabloids, containing equal quantities of blue pill and compound rhubarb pill, and therefore useful as a cholagogue and purgative; compound iridin tabloids, containing iridin, extract of hyoscyamus and compound rhubarb, serving as a valuable combination, possessing alterative and cathartic properties; compound colchicum tabloids, containing one grain of the acetic extract of colchicum with one and a half grains of salicylic acid, the joint effect of salicylic acid upon febrile conditions and of colchicum in increasing secretions and diminishing arterial throbbing and relieving pain, rendering this combination of especial value in the treatment of gout and acute attacks of rheumatism. Lastly, two useful combinations of pepsin and strychnine, with and without bismuth, according to requirements, afford an excellent formula, in the treatment of atonic dyspepsia.

PURO TEA.

(THE SHANGHAI AND FOOCHOW ASSOCIATION, 22, FENCHURCH-STREET, E.C.)

Puro tea is offered to those who find ordinary tea indigestible or with whom tea generally disagrees. The leaf is treated with a small quantity of a solution of bicarbonate of soda and an alkaline salt, and then dried in a revolving drum in the ordinary way. The infusion accordingly is distinctly though not excessively alkaline, while the alkalinity of the ash obtained on incineration is, of course, somewhat above the average yield. The effect of this treatment would be obviously not to remove the tannin, but simply to neutralise it as a free acid and form a neutral and soluble tannate. It is probable that free tannin is accountable for the injurious effects of tea, since it would appear that when this tannin is neutralised the ordinary retarding effect of tea upon the digestion is entirely removed. The proportion of caffeine was normal. Puro tea may prove suitable in some cases where ordinary tea cannot be taken without discomfort, but not in all.

INFANTS' FOOD.

(THE BRITISH MALT PRODUCTS CO., 98, BERMONDSEY-STREET, S.E.)

This is a completely malted preparation, and therefore may be regarded as having been prepared in anticipation of the peculiar dietetic requirements of infants. It consists of brown brittle grains possessing a sweet malty taste, and is to a very large extent soluble. It is well adapted for the purpose of an infants' food when prepared with milk in suitable quantity.

WHOLE MEAL BREAD.

(CHAPPELL AND SONS, 132, HIGH-ROAD, KILBURN.)

On microscopical examination this bread proved to contain a mixture of cereals, each of which would contribute special food factors. Branny particles occur in a somewhat coarse condition, so that it is probable that the bread would have some irritating action upon the intestinal tract. The total mineral matters amounted to nearly 1·9 per cent., which is consistent with the statement that the bread was prepared with whole meal.

JYREE TEA.

(A. C. IRWIN AND CO., 40 AND 42, GREAT TOWER-STREET, E.C.)

Jyree is the name given to a tea composed of ordinary tea leaves mixed with the leaves of a certain Indian plant. The infusion of the leaf appears to have distinct sedative properties and also the property of counteracting the injurious effects of an ordinary over drawn or strong infusion of rich tea. The leaf is of a light green colour, very small, and not unlike the small leaves of the yew; it measures on an average about three-eighths of an inch long by not more than one-tenth of an inch broad. The leaves yield on infusion a dull yellow liquid, which turns to a bright yellow on the addition of an alkali. The infusion is pleasantly aromatic and slightly bitter to the taste, and it is possible that its soothing effects are due to a principle allied to the lupulin of hop, which is well known to promote sleep. On extraction with suitable solvents no definite principle was obtained, but a wax-like residue of peculiarly bitter taste and an aromatic oil. The infusion of the leaf is evidently rich in soluble nitrogenous matters, which are thrown partly out of solution on the addition of the tannin of tea, so that on adding an infusion of tea to the infusion of the Indian leaf a precipitate occurs, and this may account for the soft character of the infusion made from a mixture of the leaves with tea. The foreign leaves themselves, however, contain a variety of tannin. They appear to have been used with benefit as an application to wounds in reducing inflammation and in alleviating pain, and an alcoholic extract is prepared for medicinal purposes. From the accounts which are to hand from Indian natives of the virtues of the leaf of this interesting plant it would seem to deserve further and extended attention being given to it. Its admixture with tea to nullify the latter's astringent and harmful properties is a decidedly novel expedient, and we think far preferable to chemical treatment.

A NEW ISOLATION HOSPITAL NEAR WINCHESTER. An iron isolation hospital has just been opened for the New Winchester Rural District Council on the downs to the east of the city. The building has been supplied by Humphreys of Knightsbridge, and consists of two principal wards 30 ft. by 20 ft., with matron's room and offices in the centre. The lighting is by hanging lamps, the ventilation is overhead, and the heating is by slow-combustion stoves. There are dry-earth closets with drainage in connexion. There has been extensive planting around the hospital, and the total cost has been £500.

New Inventions.

AN IMPROVED UTERINE FLUSHING CURETTE.

THE advantages of a flushing curette for the uterus are obvious, but those hitherto made have many disadvantages. Most of them do not give a good flush; in some the curette is too large compared with the diameter of the tube, and is hence liable to get "nipped" by the cervix closing upon the shaft. Even in the most modern forms the scraping edge is too extensive and liable to cause unnecessary laceration in a longitudinal direction. The instrument figured here is an attempt to avoid these drawbacks. It is simply a modified Barker's flushing curette made to a size to fit the uterus, and with two scraping edges at the end. The advantages are (1) a good flush; (2) the curette is only one-eighth of an inch wider than the shaft; (3) the scraping surface at the back of the curette enables a backward scrape to be given when dealing with the angles of the uterus without turning the instrument round; and (4) the flush is directed forwards by the anterior opening being larger than the posterior. The instrument was made from my drawings by Messrs. Down Bros. of St. Thomas's-street, London, S.E.

C. F. MARSHALL, M.D. Vict., F.R.C.S. Eng.
Lock Hospital, Harrow-road, W.

REPORT ON LEPROSY IN NEW SOUTH WALES FOR THE YEAR 1895.[1]

THIS Report contains clinical and etiological notes by Dr. Ashburton Thompson on the cases of patients admitted during the year 1895 in the lazaret for New South Wales, and notes on the histo-pathology of the tissues of patients who died in 1895 by Dr. Frank Tidswell. These reports have a special interest. In New South Wales an attempt is being made to restrict the spread of leprosy by compulsory isolation of lepers, and, as this is a measure which is urged on all civilised Governments who have lepers amongst their subjects and is likely to be more and more strongly urged, the experiment deserves careful study, particularly by Englishmen who are responsible for the government of India, where up to the present time there has been no efficient control of lepers and where spread by contagion is untrammelled. The care, sometimes excessive, with which the law is administered in New South Wales is evident from a consideration of these reports.

A woman consulted a practitioner on account of an affection which he believed to be leprosy, and he reported her under the Leprosy Act. She had given a false name and address, but was soon discovered. Her sister, who was a leper, lay concealed at the time in the same house. The patient was admitted to the Coast Hospital for observation, but her regular attendant maintained that she was not suffering from leprosy. The signs of leprosy were not considered to be sufficiently objective and she was not detained. Subsequently, in January, 1896, she consulted her regular attendant and two other medical men were called in consultation, one of whom reported the patient as a leper and described unmistakeable symptoms of leprosy, but she had again given a false name and address, and was not again seen in New South Wales. She was next heard of as a patient at University College Hospital in London![2] This history shows the difficulties inseparable from the administration of the Leprosy Act, but it also shows the necessity for restriction. The two leper sisters were the children of Irish parents. The question of heredity cannot come in, and, considering the very small number of lepers in New South Wales, the probability that the one was infected by the other is so strong as to be practically certain.

Another case is interesting. The patient, a man, aged forty-nine years, and a native-born white of New South Wales, presented the following symptoms. The right hand was analgesic. The cubital nerve, although not enlarged at and below the notch, was easily perceptible far upwards, and was therefore enlarged from that point. On pressure, sensation was limited to the fourth finger only. The left hand was also analgesic, although sensation was not so much disturbed as in the right. The ulnar nerve was large, but not hard. There were scars of recent blisters on both hands, and there were also scars on and below the right patella which were analgesic. The feet were also analgesic. In the left lower extremity there was a cluster of scars on and below the patella, which were analgesic. On the plantar aspect of the foot, at the base of the fourth and fifth toes, there was a dry, shallow and nearly insensitive ulcer, surrounded by much thickened cuticle which shelved down to the surface of the sore, marking the site of an old blister. There was a smaller ulcer on the heel of this foot. This foot was more analgesic than the right. Under pilocarpin the feet, hands, forehead, and right chin remained perfectly dry, while the rest of the body sweated freely. Dr. Ashburton Thompson naturally considered this to be a case of pure lepra nervorum—an opinion shared by other medical men—and the case was reported under the Act. It being the custom to seek a second certificate from a practitioner not in permanent relation to the Government, such a gentleman was requested to examine and report. As he was unable to satisfy himself that the disease presented was leprosy, and as the patient claimed discharge, the law giving no power to detain suspects, he was allowed to depart. This case shows the care that is taken in Sydney to secure the rights of suspected lepers. Any physician who has a practical knowledge of leprosy will have no doubt regarding the nature of the disease in this case.

Two other cases of a somewhat similar nature were diagnosed by Dr. Ashburton Thompson as cases of nerve leprosy, and the symptoms reported seem to us to completely justify the diagnosis; but two other medical men called in separately, although they considered it most probable that the disease was leprosy, declined to certify under the law. These two patients were children of the same parents, natives of New South Wales, of English descent, and resident in Sydney. In another case the patient, of English and Irish descent, was born in New Zealand, but was taken to Fiji when she was two years old. When she was twelve years of age her left forefinger became sore. It got well again in a week, and the occurrence would not have been remembered but that it was immediately followed by severe aching pains in the arm and by wasting and loss of power in the hand. Leprosy developed, and she died from that disease in September, 1895.

The reports on the histology of the fatal cases are full and careful, and will interest pathologists who specially occupy themselves with studies of the leprosy bacillus. Twelve well-executed micro-photographs are appended to the Report, in which many changes produced by the development of the bacillus and the bacillus itself are well shown. We would specially call attention to a most excellent photograph of the bacilli in serum expressed from a tubercle, magnified 1000 diameters. This photograph shows a large number of the leprosy bacilli very distinctly, and in excellence we have rarely seen it equalled. Dr. Tidswell is to be congratulated on the success which has enabled him to give the profession these excellent photographs. On Dec. 31st, 1895, there were thirty-seven lepers in the lazaret. Sixteen of them were whites, of whom four were females; the remaining twenty-one were members of various coloured races.

[1] Addressed to the Houses of Parliament of New South Wales.

[2] See THE LANCET, August 8th, 1896, p. 365.

THE LANCET.

LONDON: SATURDAY, APRIL 10, 1897.

THE Hospital Reform Association has appointed a committee to inquire into the working of special hospitals in London, and the report of this committee will be found on page 1041. It is an interesting document, and shows that the newly formed Association perceives the responsible nature of the work that it has assumed. For in these critical times for hospitals it is necessary to recognise, firstly, their value, and, secondly, the danger that there is of their altogether losing their original character and with it their claims as charitable institutions of the first order. It must be remembered that this report deals only with special hospitals — institutions of comparatively recent growth, but so numerous and in some cases so pretentious as to threaten seriously the prosperity and the very existence of the general hospital, which in its catholicity embraced all cases and preserved the broad character of medicine and surgery. It is gratifying already to see in several directions indications of a reaction against specialism. In general hospitals and in private practice men are everywhere being trained whose readiness in different emergencies rebukes those who would restrict their practice to this or that branch of medicine.

Our readers will study the report for themselves, but we must emphasise a few of the chief facts which it brings out, and may be allowed a preliminary word of praise in reference to the tone of moderation which characterises it. The authors seem ready to admit, if not the virtues of special hospitals, at least the virtues of those who represent them. If they point out in clear words the reluctance of some officials to give information as to their institutions, they are equally ready in other instances to acknowledge candour and willingness where they have met them. Hospital abuse is not to be removed by random and reckless censure. Some special hospitals have justified their existence by their work, and have put the great general hospitals of the country on their mettle, leading them to introduce into all their work provision for the special case. Let us now come to some of the individual facts which the report brings out. Looking especially at the financial system on which a large number of these hospitals are worked, we find that they are largely dependent on the payments of patients. Of the forty-one special hospitals visited, at least thirty receive direct payments from their patients, the receipts from this source amounting in 1895 to £24,085. The authors of the report significantly tell us that over half of these institutions obtain more money from patients than from annual subscribers. One institution receives twenty-five times as much from its patients as from its subscribers. At St. John's Hospital for Diseases of the Skin the payments of patients (out-patients from 1*s.* to 2*s.* 6*d.* weekly, in-patients 15*s.* weekly) amount to £2263, while annual subscriptions amount to only £773; at this institution the secretary showed every willingness to answer questions. At the Central London Ophthalmic Hospital more than half the income is derived from patients. At the Hospital for Diseases of the Throat, Golden-square, patients in 1894 paid £2858 and the annual subscriptions amounted to £286. At one hospital it is open to the medical officers to see private patients, and it was not easy to ascertain who decided which were private and which were hospital cases. The questionable nature and influence of these hospitals is further shown in the petty nature of the sums charged per visit to out-patients. Thus at the Central London Ophthalmic Hospital out-patients are charged 2*d.* a visit, while the system of inquiry into their circumstances is stated in the report to be merely nominal. At St. Peter's Hospital, with £2186 derived from patients' payments and £250 from annual subscriptions, the authorities appear by the report to be accommodating in their charges to out-patients, who may be called upon to pay on a sliding scale from 6*d.* to 1*s.* or 10*s.*

The conclusion is irresistible from these facts, unless the report can be gainsaid, that at these institutions charges are made which would bring any private practitioner into discredit, and that medical and surgical practice is carried on in unfair competition with the general practitioner. What would be thought of any private practitioner who pretended to supply skill and medicines for 6*d.* or even 2*d.* a visit? Yet here are hospitals, in some cases officered by gentlemen of the highest reputation, which, according to this report, enter into wholesale competition with private practitioners, and secure patients, it would seem, by the lowness of the fee demanded. The time will come when our consulting brethren will refuse to be made the tools of such a ruinous and demoralising system. The report concludes with sundry recommendations for the amendment of these evils, such as the insistance on a wage limit, with occasional departures from it at the discretion of a competent inquiry officer; the total abolition of the system of subscribers' letters; more care on the part of subscribers, and especially of the Hospital Saturday Fund, in the gifts of such letters as they have. Like ourselves, the Association looks with confidence to the staffs of the hospitals to help to avert the ruin alike of the truly charitable institutions and the profession at large by the monstrous system of indiscriminate and inefficient relief which now prevails.

DURING the last few years the relations existing between the epidemiologist and the oyster have not, it is to be inferred, been of the most cordial description, and although the oyster, owing doubtless to its high value both financially and gastronomically, has borne the chief brunt of the attack, it cannot be said that certain other shell-fish, such as mussels and cockles, have come out of the ordeal to which they have been subjected altogether unscathed. For many years it has been matter of common knowledge and experience that certain persons and families possess a peculiar susceptibility with regard to mussels, and numerous instances are on record in which the consumption of this

mollusc in an uncooked condition has been followed by serious and often fatal manifestations of ptomaine poisoning. Within recent years, however, evidence has been accumulating which tends to incriminate mussels as being at times responsible for conveying enteric fever, and in the recent Local Government Board report on "Oyster Culture in Relation to Disease" Dr. BULSTRODE has contributed a chapter in which he shows, after discussing its natural history and distribution, that the mussel is at times gathered from localities dangerously near to sewer outfalls, and that there is need for some control in reference to mussel "lays" and "gardens."

We note that Dr. RIDLEY BAILEY, medical officer of health of Bilston, in his current annual report which has just been issued, records an interesting instance in which four persons, visitors to Blackpool, were seized with symptoms of ptomaine poisoning shortly after consuming raw mussels procured from the vicinity of a sewer outfall, and two of these four persons subsequently developed enteric fever at such a date after the ingestion of the mussels as to render it highly probable that the shell-fish were the means of conveying the disease. These facts were reported to Dr. JASPER ANDERSON, medical officer of health of Blackpool, who stated that there were at that place in October last no less than six cases of enteric fever which had apparently been caused by the ingestion of raw mussels procured from a bed where sewage contamination was a matter of probability. Dr. ANDERSON very properly had notices placed on the mussel beds warning the public as to the danger of consuming the fish. We learn, too, from the Local Government Board reports that in 1883 Dr. M. K. ROBINSON, medical officer of health of the East Kent Combined District, reported two case of enteric fever contracted from consuming raw mussels procured from a locality liable to sewage pollution, and that in 1894 Dr. F. C. H. PIGGOTT of Teignmouth and Dr. NEWSHOLME of Brighton reported cases where the evidence pointed strongly in a similar direction. Ptomaine poisoning as the result of eating mussels dates back, however, considerably earlier than 1883, and it is recorded that in 1827 some thirty persons were attacked with serious symptoms, which in two cases ended fatally, after eating mussels collected from the dock gates at Leith, and animals to which some of the mussels in question were given were similarly affected. Amongst other disasters of a like nature may be mentioned that of Wilhelmshaven, where the mussels which caused the mischief were procured from the bottoms of two vessels in the harbour; and in 1890 there occurred what was known as the "Seapoint calamity," in which a mother and four children died from the effects of eating mussels procured from a locality to which sewage had access.

There is still much to be learnt in connexion with the subject of mussel poisoning, but it is obvious that there are other factors than idiosyncrasy involved. It is generally considered that the poisonous effects are due to what is known as *mytilotoxin*, a poison produced by the agency of bacteria which have as a rule been conveyed to the mussels through the sewage pollution of the water in which they have grown or been placed; and although there would seem to be certain instances on record in which sewage could hardly have polluted the water, a large number of outbreaks have been caused by mussels taken from places liable to pollution of one kind or another, and there is thus clearly need for some control of the mussel industry. There would seem to be no very satisfactory evidence pointing to copper as the cause of the peculiar symptoms observed, as in the Leith instance Dr. CHRISTISON analysed some of the mussels taken from the stomachs of persons attacked, but was unable to detect a trace of the metal in question, while it appears that in some instances copper could not possibly have gained access to the bivalves to which the illness was traced. It is a difficult matter to prevent mussels from growing in the vicinity of sewers, and it is also difficult to prohibit excursionists and others from helping themselves to such mussels; but it would certainly seem that sanitary authorities in whose districts are mussel "scalps" liable to sewage pollution should take steps such as have been taken by Dr. ANDERSON at Blackpool, and in any subsequent legislation on this subject powers might be conferred to prohibit the laying down of these molluscs in unsafe positions. The cooking of all mussels intended for human consumption would doubtless do much to remove the risks of contracting enteric fever, but this process would not be equally effective against ptomaine poisoning. In this latter connexion it may be of practical utility to record that in the Wilhelmshaven outbreak, which was investigated in one or another of its aspects by numerous observers, amongst whom were VIRCHOW and SALKOWSKI, it was discovered by the latter that *mytilotoxin* became inactive when treated with carbonate of soda, and that mussels boiled for some six minutes in a solution of this salt lost their toxic properties—a fact which appears to afford indication for treatment in cases of poisoning by mussels.

THE literature on the health of the soldier in India has grown until it is impossible to deal with it in its entirety, Happily, there is not any need to do so, for the facts and the moral they convey are comparatively plain and simple, and as they are quite capable of being understanded of the people there is a general consensus of opinion that something has to be done to check the evil. Two ways of dealing with this form of contagious disease have been proposed—namely, that of the Secretary of State in his despatch to the Government of India regarding the measures to be adopted for checking the spread of venereal disease among the British troops in India, and that of "The British Committee of the Federation for the Abolition of the State Regulation of Vice" in a published document which strikes us, we confess, as in some respects a feeble and jejune production manifesting but little acquaintance with human nature or the Army. What is the practical good of a Select Committee going again into the fundamental constitution of the British Army? The broad facts are admitted, and the case as it stands has to be met by some practicable remedial measures capable of speedy application. It puzzles us, as it does most people, to understand how the presence of disease is to be ascertained without examination. If the abolitionists of the State regulation of vice, as they are pleased to style themselves, have no more plausible, practical, and unobjectionable measures to suggest in the way of remedy

than those they have put forward in their circular we do not think they will obtain the support of many sensible people. Lord GEORGE HAMILTON rests upon a firm foothold of facts, and the position he has taken up in his despatch is a logical, well considered, and studiously moderate one. HER MAJESTY'S Government, recognising the extent of the evil, its appalling increase of late years, its increasing virulence, and the way in which the health of the civil population, and of subsequent generations in this country, is imperilled by the annual discharge from the Army of men constitutionally diseased, cannot acquiesce in the continuance of the existing state of things. The Government considers that the cantonment rules laid down in the Act of 1889 should not merely be applicable to "cholera, small-pox, diphtheria, or typhoid fever," but to all contagious and infectious diseases, including venereal disease. We may parenthetically remark that the Indian Government has quite recently passed an Epidemic Diseases Act for the express purpose of dealing with the present epidemic of plague. Now plague is a very rare and occasional visitant of that country, and, however infectious and fatal it may be, it is not an hereditary malady; whereas the scourge of syphilis is permanently present, it is eminently contagious and hereditary, it gravely affects the constitutions of those attacked by it for long periods of time, it overlaps and complicates the course of other diseases, and very often involves the innocent and is transmitted to the unborn. It follows, therefore, by a parity of reasoning, that in these respects syphilitic disease calls for the application of preventive measures quite as much as plague. If the State owes it as a duty to its subjects to interfere with their liberty in order to protect them against disease in one case, it does so in the other. But to return to the Government despatch. The Secretary of State mainly adopts and follows the recommendations of the memorandum of the Army Sanitary Commission on the subject. He calls upon the Government of India to consider the whole question and to forward a copy of the draft rules proposed to be issued in order to give effect to the decision of HER MAJESTY'S Government. We quite appreciate the need which exists for the Government proceeding warily if they are to avoid giving "occasion for the enemy to blaspheme" in a matter about which so much ignorance, prejudice, and false sentiment prevail. But it cannot be said that the Government has not safeguarded the moral aspect of the question, or that the measures proposed in the official despatch are not of a most moderate and reasonable character.

The whole question is eminently one on which the members of the medical profession are qualified to speak, for they best know the gravity of the case; and the Royal College of Physicians of London and the Royal College of Surgeons of England have, most properly, in the interest of public health and in the cause of humanity—and especially as far as the unfortunate women are concerned—done what it was their plain duty to do to strengthen the hands of the Government in this matter. It is really a national demand that an earnest attempt should be made to deal with what amounts to a national scandal. We do not think that we can do better than summarise the recommendations and suggestions that have been already put forward, with such additions as occur to us. In the first place it must be frankly recognised that venereal disease belongs to the category of contagious and preventable diseases, and we are consequently bound to take what steps we can to prevent it. Women in a diseased condition should not be allowed to propagate contagion, but be required to go to hospital or leave the cantonment, and the measures that are necessary to prevent women from spreading contagion are, of course, applicable to soldiers under the same circumstances. The examination and treatment of females should be conducted by trained members of their own sex under medical supervision, in order to lessen or remove objections in this respect; but it would be well that medical officers who have the treatment of soldiers of the European Army should be also connected with the hospitals for female cases. And, in view of the importance of detecting and treating these diseases in their earliest and initial stages, means should be taken to secure that soldiers suspected of concealment, and those who have suffered from venereal disease, should be subjected to inspection—the latter for a year after infection.

Not only should soldiers arriving in India be systematically warned of the serious risks they incur, but it would be well to have a pamphlet printed and distributed among them, showing in a very simple way the extensive prevalence of venereal disease in India, giving plain and terse statement as to the lamentable and far-reaching consequences likely to ensue, and emphasising the great importance of early treatment when the disease has been contracted. This having been done, it might subsequently be worth consideration whether soldiers suffering from this malady might not be subjected to some pecuniary fine or loss, the proceeds to go to the benefit of the corps to which they belonged, and not to the State. Such a regulation, however, would enhance the risks of concealment. The powers of the commanding officer to place suspected places out of bounds, to prevent the employment of female labour in cantonments and women lurking about their vicinity, should be enlarged, and the cantonment magistrate should, as far as possible, aid in these efforts. It is worth considering whether the bazaars could not be placed in charge of some native contractor accustomed to oriental life and habits, who should be held responsible to the local European authorities for the proper conduct of the bazaar, and who could act in concert with such authorities in any repressive measures that might be deemed expedient. It is scarcely necessary to add that every care should be taken to make the hospitals for the treatment of females comfortable, and to secure for the patients humane, considerate, and kindly treatment, in order to induce them to recognise and desire to reap the advantages they afford. Finally, we consider that, after all, the most important point is to give the authorities in India a free hand in this matter, with the view of devising some scheme and the machinery for working it; otherwise they cannot accomplish an object so eminently necessary on the grounds alike of justice and humanity.

ROYAL INSTITUTION.—The following are among the lecture arrangements after Easter: Dr. Ernest H. Starling, three lectures on the Heart and its Work; and Professor Dewar, three lectures on Liquid Air as an Agent of Research.

Annotations.

"Ne quid nimis."

THE WORKHOUSE INFIRMARY NURSING ASSOCIATION.

IF Boards of Guardians would only realise that whatever tends to promote the rapid recovery of the sick under their care, tends also to diminish the length of time a sick pauper remains dependent on the rates, they would surely appreciate the great work which this association has done for them and for the sick poor committed to their care. Surely if they could once be made to grasp this obvious fact they would be induced to contribute more liberally than is indicated in the annual report of the philanthropic association now before us. The paltry one, two, or three guineas which these bodies contribute each year is wholly out of keeping with the benefits they receive in return and inconsistent with the hundreds of pounds spent for other purposes less necessary and less advantageous. The association depends entirely upon voluntary contributions for support, and the training of every nurse supplied costs, if our information be correct, approximately 21 guineas. Surely it would not be too much to ask the guardians to contribute a portion of this sum for every fresh nurse supplied to them. It is the bounden and fundamental duty of the guardians of the poor to provide for the sick poor, and we fail to see why a philanthropic public should be called upon to discharge the duties which properly belong to these officially appointed representatives of the ratepayers. Year by year the difficulty experienced by guardians, especially in provincial and rural districts, in procuring good nurses becomes greater. The openings for trained nurses are constantly becoming more numerous, and the conditions of workhouse and infirmary nursing certainly do not become more attractive. We hear of guardians advertising again and again without result. Some of these boards then apply to the association, in the report of which we read: "There have been 130 applications for nurses, and 73 nurses have been appointed during the year"; and, again, "Twenty-four boards have applied to us for the first time, but only twelve of these have been supplied with nurses." Now, why is it that hardly more than half of the applications have been responded to? Here is the answer: "Financial statement.—Unless we receive more support our training must be further diminished." We commend this matter earnestly to the attention of the guardians, in view of the extreme importance of having properly trained nurses for their sick, especially when the medical officer is non-resident, and in view of the economy to the rates which may be effected in the more speedy and successful cures. Some of the boards show their appreciation of the efforts made by the association on their behalf by waiting some months for its nurses. Something, however, must be done to meet this steadily declining supply of good nurses. Why do not some of the boards join hands with each other and with the Nursing Association to organise a central training school of their own? Meanwhile, surely, it is not too much to ask of the guardians of the poor that they will, for each trained nurse supplied, contribute, say, half the cost of her training—10 guineas—leaving philanthropy to do the other half. It is with no sudden impulse that we make this suggestion. We have watched with considerable attention the growth of the Workhouse Infirmary Nursing Association, and now and then have criticised its methods; but it has stood the test of time and the most searching investigation, and we confidently believe that no more suitable body could be entrusted with the work referred to. It is true that something might be done to increase the attractiveness of workhouse and infirmary nursing in one or two directions. The first of these is to give the nurse a more clearly defined position in her work and make her more directly responsible to the medical officer. The other is to raise the salary and emoluments to a degree commensurate with the monotony and drawbacks of the work. The Metropolitan Fever Hospitals, acting on this principle, give adequate salaries and never want for candidates. But unless the guardians take these matters into their earnest consideration, and adopt some such action as that which we have above suggested, the evils referred to will become steadily worse and worse, and by-and-bye we shall find that we have reverted to the condition of things revealed in the inquiry initiated by the Founder of THE LANCET half a century ago. We have received a copy of the return made to the House of Commons showing the proportion of sick to the nurses and pauper helps attendant on them, and this we propose to notice in a future issue.

PROFESSOR R. KOCH'S FURTHER RESEARCH ON TUBERCULIN.

No one conversant with the thoroughness of all Professor Koch's work will have been surprised at the announcement that, undaunted by the comparative failure of tuberculin as a remedial agent, he should have been engaged during the seven years that have elapsed since he made his discovery known in endeavouring to determine the causes of its failure and to obtain a product which should be free from the drawbacks of the glycerine extract. For the details of the method which he at length arrived at and the ingenious processes it embraces we may refer to the account given by our Berlin correspondent. Suffice it here to say that they aim at separating the bacillary substance into two components, one of which, containing ingredients soluble in glycerine, has the properties of the original "tuberculin," producing marked reaction in tuberculous subjects and setting up changes around tuberculous foci. The other constituent, mechanically separated from the former, contains ingredients which are mostly insoluble in glycerine and also differs from the other moiety in its physiological action, only producing reaction if given in large amount. But this new product, the "tuberculin remainder," or "TR," as he terms it, is found to possess marked "immunising" effects, and its administration is proceeded with in gradually increasing doses until immunity is obtained. Professor Koch has not published these researches before being enabled by extensive trials to pronounce very definitely upon the superiority of the new preparations, and the results they produce in cases of tuberculous disease. It is noteworthy that he speaks with commendable caution as to the permanency of the results he has obtained, and he thinks that it may be possible to produce a lymph of still greater efficacy. We are glad to observe that he lays stress on the fact that these remedies are only efficacious in the early stages of tuberculous disease, a fact which was largely lost sight of in the former therapeutic trials, which ended perhaps in too sweeping a condemnation of the remarkable agency which Professor Koch had discovered. It is not unlikely that, as one consequence of the inconsiderate and irrational manner in which the use of tuberculin was then adopted, the improved lymph may not for some time be tried on a sufficiently wide scale to judge of its efficacy. Nevertheless Professor Koch's persevering labours and the knowledge that he would not venture to recur to the subject without good cause must have weight, but we trust that those who do make trial of the remedy will

strictly adhere to the conditions which he lays down and will, moreover, keep careful and accurate records of the cases so treated.

ENGLISH-MADE THERMOMETERS.

IN our remarks upon this subject in THE LANCET of March 27th we expressed our opinion that the most reliable mercurial thermometers were of English manufacture, and that distinct confirmation of this was afforded in the fact that in the Kew verifications the returns showed that the corrections were seldom two-tenths different from the graduated mark. We should point out, however, that owing to a clerical error we stated in the article referred to that the average deviation is never more than one degree, whereas it should have been two-tenths of a degree. We have received this week a beautifully mounted thermometer from Mr. Hicks in substantiation of the case he originally made out in regard to the accuracy of English-made mercurial thermometers. It registers from 20° Fahrenheit up to 100°, and is evidently suited, therefore, for the gauging of the temperature of the living room or of a sick-room or hospital ward. The corrections to be applied to the scale readings are, according to the determinations by comparison with the standard instruments at Kew, as follows: At 32°, −0·0°; at 42°, −0·0°; at 52°, −0·0°; at 62°, −0·1°; at 72°, −0·1°; at 82°, −0·1°; and at 92°, −0·0°. The instrument is graduated into unit graduations Fahrenheit, which are divided again into two-tenths of a degree. The accuracy of a thermometer is, of course, of the utmost clinical importance, and the point raised by Mr. Hicks as to the greater constancy of English glass in regard to contraction is one entitled to consideration. We should like to know what Mr. Hicks's actual experience is in regard to the slight diminution of bore which the tube of a thermometer undergoes after a time, and what is the usual extent of the error thus involved.

SANITARY MEASURES IN THE DIAMOND MINES.

IN an exceedingly interesting lecture delivered recently by Professor Crookes he refers incidentally to the subject of the environment of the native workers in the South African diamond mines. It cannot be doubted that there is every necessity for this class of labourers to be watched over in regard to hygienic conditions. For instance, we are told that "all below ground is dirty, muddy; grimy, half-naked men, black as ebony, muscular as athletes, with perspiration oozing from every pore, are seen in every direction, hammering, picking, shovelling, wheeling the trucks to and fro, keeping up a weird chant which rises in force and melody when a titanic task requires excessive muscular strain—the whole scene is far more suggestive of a coal mine than a diamond mine. And all this mighty organisation, this strenuous expenditure of energy, this clever, costly machinery, this ceaseless toil of skilled and black labour going on day and night, is just to win a few stones wherewith to deck my lady's finger." Professor Crookes, however, does not go so far as to say whether this employment is made as healthy as possible for the employés. It is true, as he says, that every kind of recreation seems to be provided for them, and in cases of accidents or illness there is a well-appointed hospital, where the sick are attended and medical supervision, nurses, and food are supplied free by the company. There is, of course, some amount of preventive treatment in the provision of recreation, but on the whole the measures would seem to be curative rather than preventive. Seeing the wealth of material they turn out, the labourers deserve every care at the hands of their masters. In regard to this wealth of material there can be little doubt, since "from two to three millions of carats of diamonds are turned out of certain mines in a year, and as five million carats go to the ton this represents half a ton of diamonds. To the end of 1892 ten tons of diamonds had come from these mines, valued at sixty millions sterling. This mass of blazing diamonds could be accommodated in a box 5 ft. square and 6 ft. high." Professor Crookes looks back with pleasure upon the Arabian Nights vision of the strong-room of one of the biggest companies which he visited, which was "literally heaped with stones won from the blue ground, purified, flashing, and of inestimable price, ready to play their part in the lives of men and women." We need hardly add that the discourse dealt with some interesting facts on the properties of the diamond. Perhaps the most remarkable physical property next to refraction is that of becoming phosphorescent after exposure to the sun's rays, one green diamond in particular in Professor Crookes's collection giving, as he stated, a pale green, almost white, light as brilliant as a candle flame. It was also pointed out that the x rays may be used very successfully in discriminating between imitation and real diamonds, the former being perfectly opaque and the latter extremely transparent. We found some months ago, when experimenting with "paste" and real gems, that this difference could be distinctly seen on the fluorescent screen.

IRON STAPLE IN THE ŒSOPHAGUS; REMOVAL AFTER LOCALISATION BY THE ROENTGEN RAYS.[1]

WE recently published two cases in which by means of skiagraphs halfpennies were diagnosed impacted in the œsophagus, and their removal was effected.[2] This case is more important because in the absence of the exact diagnosis furnished by the skiagraph, on the one hand, the most disastrous laceration might have followed attempts at removal in the ordinary way by the probang; or, on the other hand, the operation of œsophagotomy might have been unnecessarily performed. A man, aged sixty-nine years, was in the habit of swallowing his food after very slight mastication, in consequence of the absence of his molar teeth. Whilst eating a piece of mince-pie he was conscious for a moment of a hard substance in his mouth. Agonising pain followed, which radiated from the entrance of the œsophagus outwards and upwards along both sides of the neck and appeared to be caused by two sharp points which pierced the tissues with each attempt at deglutition. The pain, though much lessened in intensity, remained the same in locality and character until the foreign body was removed two weeks later. On the evening of the first day laryngoscopic examination showed that the normal contour of the arytenoids and aryepiglottic folds was lost, and that the area presented a confused mass of œdematous tissue which obscured the view into the larynx. Dyspnœa was slight, although distressing when an attempt was made to probe the œdematous area even after the free use of cocaine. The voice was husky and weak and interrupted by severe paroxysms of coughing. An enormous quantity of thick, ropy, clear-coloured mucus welled up from the œsophageal region of the pharynx, and blood oozed from the region at the back of the larynx. Neither by laryngoscope nor palpation could a foreign body be detected. The patient was first fed upon milk and then upon soft food, hashed meat, eggs, &c. The œdema subsided, and on the tenth day a small rounded substance was seen behind the right arytenoid. It resembled the elbow of a bent piece of heavy wire. A blunt hook was passed around it, but it was found to be firmly adherent. It was readily grasped by Cuscoe's forceps, but all the force that could be used failed to move it. Skiagraphs showing antero-posterior and lateral views were taken. The

[1] Bliss: International Medical Magazine, March, 1897.
[2] THE LANCET, Jan. 30th, 1897, p. 313.

object seemed to be the frame of a buckle, and lay diagonally across the œsophagus, mainly to the right of the median line, about in front of the fourth cervical vertebra. It was then possible to remove it with the laryngeal forceps. It proved to be a meat staple, unusually large, such as are used for fastening cards of address on meat. It consisted of a body an inch in length, which bore at each end an arm at right angles to it half an inch in length, the whole thus forming three sides of a rectangle. The arms were extremely sharp and ragged, and were firmly attached to the anterior wall of the œsophagus behind the arytenoid and cricoid cartilages.

SOLID SOLUTIONS.

IT is practically accepted now that the interesting class of bodies known as alloys are simply the solution of one metal in another. Some interesting experiments on this subject were shown in a lecture by Mr. C. T. Heycock, F.R.S., at the Royal Institution on the 2nd inst. The fact that when a weak solution of permanganate of potassium is frozen the ice yielded is quite colourless, so that the salt becomes concentrated, is probably true also for metals, and further confirmatory evidence is gained in the following ingenious experiment devised by Mr. Heycock and his co-worker Mr. Neville. If a solution of gold in sodium be allowed to solidify slowly the appearance of the block, or a section of it, would be quite uniform to the eye—that is, the gold, apart from the sodium or *vice versâ*, would be indistinguishable to the eye. By taking, however, a shadowgraph of the section by means of the x rays, a photograph is obtained showing the actual structure of the alloy, the sodium being transparent to the x rays while the gold is opaque. From the way the two metals are disseminated in crystalline form through the mass as it becomes solid a remarkable analogy evidently exists between the behaviour of an alloy and a solution in the act of solidifying.

WATER-SUPPLY AND SEWERAGE OF SYDNEY.

THE eighth annual report of the Sydney Board of Water-Supply and Sewerage states that during the eighteen months from Jan. 1st, 1895, to June 30th, 1896, the average amount of water supplied daily was 16,645,014 gallons; the estimated population using the water was 408,283, so that the average daily consumption per head was 40·76 gallons, as against 34·23 gallons in the year 1894. During the same period more than ninety-nine miles of new mains were laid, and 1433 houses were connected to the water-supply, making a total of 85,059 houses at present supplied, and a total length of 891 miles of water-mains, exclusive of trunk mains. The supply is derived from the Nepean River and two of its tributaries, the Cordeaux and Cataract Rivers, the catchment area being about 354 square miles. From the intake the water is led for a distance of about forty miles through open canals and tunnels to the first reservoir, which is called Prospect Reservoir and is about twenty miles from Sydney. The monthly analyses show the quality of the water to be excellent; the total solid residue, dried at 220° F., varied between 5·8 and 6·6 grains per gallon, the chlorine "as chlorides" varied between 2·3 and 2·6 grains per gallon. For water supplied for domestic purposes otherwise than by measure the charge is 10*s.* per annum for lands and tenements assessed at £17 and under, 7*d.* in the £1 for assessments from £17 to £300, and slightly reduced rates for higher assessments. Public hospitals and charitable institutions have a free supply limited to fifty gallons daily for each resident in the former and thirty gallons for each in the latter. The water revenue for the year ending June, 1896, was £174,357, and the expenses, including maintenance, management, depreciation, and interest, were £182,075, so that there was a deficiency. The returns of the sewerage department show that during the eighteen months 22½ miles of sewers were laid by the board and 5½ miles by the Government, making a total of 230 miles of sewers now under the control of the board. There are two outfalls, one discharging into the open sea and the other on to a sewage farm. About two years ago the board made over the farm to a lessee for a period of ten years, but it was worked in an unsatisfactory manner and the board exercised their power of re-entry for breach of the conditions of the lease. The daily discharge on to the farm is 2,059,000 gallons, which are disposed of over 65½ acres of land. The effluent runs into Botany Bay. The sewerage rate is 10*s.* per annum for premises assessed at £17 or under, and 7*d.* per £1 for assessments over £17. The accounts show that the sewerage revenue for the year ending June, 1896, was £85,486, and the total expenses, including maintenance, management, depreciation, and interest, were £93,749, so that there was a deficiency of £13,263. A report prepared by Mr. T. M. Kendall, medical adviser to the board, gives some statistics for the year 1895 relative to the prevalence in Sydney of some zymotic diseases more or less dependent on faulty drainage or the consumption of impure water. The population of the "metropolis"—i.e., the combined city and suburbs—was 423,000; the total deaths were 5549 (or 130·7 per 10,000), including 297 from diarrhœa, 88 from diphtheria, and 81 from enteric fever. The last-mentioned disease unfortunately increased in the beginning of 1896, and during the six months ending June 30th, 1896, it caused 102 deaths. The lowest temperature for the year 1895 was 36·8° F., registered on July 9th, and the highest was 96·8° on Dec. 16th; the greatest daily range—viz., 31°—occurred on Nov. 7th. The weather was extremely hot in the beginning of 1896, a temperature of 108·5°, which was the highest ever recorded in Sydney, having been reached on Jan. 13th. The greatest daily range for the first six months of 1896 was 32·2°, which occurred on Jan. 16th, when the temperature was 105·2° at midday and 73° at night.

"THE EDUCABILITY OF THE NERVOUS SYSTEM."

THE above was the title of an able and original scientific paper read by Dr. Rorie of the Dundee Royal Asylum at a recent meeting of the Naturalists' Society of that city. Professor Waymouth Reid occupied the chair. The experience and authority of the lecturer on the subject of psychology lent additional value to an excellent contribution, which was received by an appreciative audience with evident approbation. The text was set out in the following principles: "Can the functions of the nervous system be raised by care and steady diligence to a higher standard than would appear at present to hold ground? In other words, Could the present mental and moral standard of the human subject be raised by the improvement and education of the nerve cell; and, secondly, would mere neglect in the regular exercise of the various nerve centres—allowing these to sink into a state of atrophy—result in moral and intellectual degeneration?" In elaborating his theme the lecturer proceeded to give a lucid explanation of recent additions to the knowledge and functions of the nerve cells, illustrating his remarks by means of a large series of diagrams; their structure and development and the importance of a healthy nutrition were fully explained. It was also pointed out how periods of mental depression and barrenness and states of activity and fruition were in their turn to be traced to the exhaustion and recuperation of the nerve cells respectively. The condition of the nerve-cell in relation to the development of insanity and its bearing upon the elucidation of many most important points connected with criminal anthropology were touched upon. In conclusion, Dr. Rorie

stated that the latent capacities of individuals were in the majority of cases, if not in all, far beyond what are usually reached, and that the possibilities of increasing and developing these to their full extent depended on raising the vitality of the nervous system to its highest degree. In every individual vast numbers of cerebral cells probably remained undeveloped, and although as yet no nerve centres had been found corresponding to our knowledge of good and evil, of justice and benevolence, of purity and veracity, it could hardly be doubted that these had correlative neural equivalents equally with the mental and intellectual faculties, and they were therefore as much worthy of careful training.

ROYAL COMMISSION ON TUBERCULOSIS.

SITTINGS were held at 7, Whitehall-place, on April 1st and 2nd, Sir Herbert Maxwell, Bart., M P., being in the chair The other Commissioners present were Dr. R. Thorne Thorne, C.B., F.R.S., Professor G. T. Brown, C.B , Mr. Shirley F. Murphy, Mr. J. Cooke Trench, and Mr. J. Speir, The evidence was heard of three of the gentlemen nominated by the Cattle Diseases Committee of the Central and Associated Chambers of Agriculture—namely, Mr. B. St. John Ackers (chairman), of Gloucestershire, Mr. T. Carrington Smith, of Staffordshire, and Mr. J. Kay, of Lancashire. The evidence of the witnesses had reference, amongst other points, to the nature of the disease, its extent in various herds of cattle, and to the loss inflicted upon dairy farmers and agriculturists generally by its prevalence. The view was expressed that a stamping-out process, such as has been practised in the case of cattle plague, foot and mouth disease, and pleuro-pneumonia, was not applicable to tuberculosis, but that compensation should be given to the owners of animals which when living were apparently healthy, but which after slaughter were condemned and confiscated in the interests of the public health by reason of the presence of the disease.

THE CHEMICAL SOCIETY.

THE proceedings of the Chemical Society, as becomes the now largest affiliated branch of the Royal Society, are invariably conducted with due decorum and with but little excitement. The annual meeting of the Fellows on the 31st ult. was, however, an exception, on the occasion of the election of a new president in succession to Mr. Vernon Harcourt. The council had recommended Professor Dewar, but for some reason a good number of the Fellows took objection to the council's recommendation and put forward Professor Ramsay to represent them in his stead. This amounted to a vote of censure on the council's discrimination, and so there were important issues at stake, and in consequence there met together a record gathering of the Fellows. The method of ballot led to considerable confusion and discomfort. It consisted in the Fellows coming forward to the table and placing a voting paper in the basket watched over by the scrutators, and giving in at the same time their names. This procedure leads, of course, to the gathering of a crowd round the tables, to gain access to which is a struggle and for a voter to resume his own seat even worse. It would be much simpler, and certainly more comfortable, if the scrutators were to go round with their baskets while the company remained seated. The result of the election proved in favour of Professor Dewar, although, through some doubt as to certain of the votes being invalidated, the actual numbers were not disclosed. The President-elect occupied the chair at the annual dinner in the evening, when there were several distinguished representatives of science present. Amongst these was Lord Lister, who, in proposing prosperity to the Chemical Society, remarked on the enormous growth of the society, which was a fact curiously in contrast with the doubt that had been expressed by a scientific man at the time of its inception as to whether chemistry was a subject which would sufficiently occupy the attention of a society. The society's rooms at Burlington House were now becoming insufficient for the purpose. Other toasts were proposed by Professor Crookes, Dr. Gladstone, and Dr. Russell, and amongst those who replied were Professor Michael Foster, Sir John Evans, and Professor Thomson.

TREATMENT OF CHOREA BY EXERCISES.

As until recently in heart disease the value of rest was well recognised, whilst that of exercise was overlooked, so in other diseases in adopting one principle we thereby often fail to see that its opposite may also have an application. Most practitioners would insist on rest in the acute stage of a case of chorea that was at all severe, but they would never think of treating the chronic disease otherwise than by drugs, though gymnastics are not ignored in the list of remedies of the text-books. In a recent number of the *Canadian Journal of Medicine and Surgery* (March, 1897) Dr. M'Kenzie and Dr. Galloway bear testimony to their value which is decidedly convincing. A boy, aged eight years, the subject of chorea, came under treatment for lateral curvature of the spine. He was permitted to join a gymnastic class and take light work. At first he could not make the required movements, but he was allowed to continue and do the best he could. After the first lesson it was evident that the incoördination was less marked. The exercises were continued daily, and in less than a week every sign of chorea had disappeared. The treatment was tried in three other cases. In two no improvement occurred, but the circumstances were very unfavourable, and the patients only remained in the class a short time. The third was a girl, aged eleven years, who had suffered from chorea for two years, and had ceased to improve for several months, though under competent supervision. After three weeks' treatment careful examination revealed only an occasional slight incoördinate movement of the right foot in walking.

ELECTRIC LIGHTING IN MANCHESTER.

SOME remarkable statements were made at a recent meeting of the City Council showing the rapid growth of electric lighting in Manchester. Plant was put down in the first instance to last, as was thought, for three years. In five months the plant was increased sufficiently to last, as was expected, twelve months, but it only sufficed for seven months. Alderman Higginbottom, chairman of the Electric Lighting Sub-committee, said: "Beginning with a capital of £120,000, they had increased it to £300,000, and that would be gone this year, and in another six months they would have to come to the council for another quarter of a million for new plant." They began with 8000 sixteen-candle lamps three years ago. Now there are over 70 000. It appears to be profitable to the city, for in the first year expenses were covered, and in the second a handsome profit was made. Last year £11,000 of the profits were given in aid of the rates, and the cost to consumers was reduced 25 per cent., while this year it is said the cost will be reduced by another 25 per cent., and a larger sum given to the city in reduction of rates; and in a few years, Alderman Higginbottom added, "the new light will be within the reach of every man." So much has the undertaking increased that a new committee has now been formed—the Electricity Committee—"to deal with all matters arising under the Electric Lighting Acts, 1882 and 1888." In spite, however, of the extension of electric lighting, the consumption of gas steadily increases, and the Gas Committee will still have enough on their hands to occupy their best energies. The use of gas for cooking and in various ways for heating purposes, as well as for gas engines, is every day

becoming greater, and will do something to lessen the canopy of smoke which too often broods over Manchester.

THE ILLNESS OF MR. J. B. BAILEY.

WE regret to announce that Mr. J. B. Bailey, the librarian of the Royal College of Surgeons of England, is very seriously ill. Mr. Bailey has been well known for some years to readers in the library of the College, and many of the medical profession have reason to be grateful for the help which he was always so ready to afford to those who stood in need of it.

THE STRUCTURE OF NASMYTH'S MEMBRANE.

CONSIDERABLE light has been thrown on the structure of Nasmyth's membrane by the recent researches of Mr. Paul of Liverpool. Hitherto this tissue has generally been regarded as a thin layer of cementum, but from Mr. Paul's specimens there seems to be but little doubt that it is at any rate epithelial in character, and therefore in all probability a remnant of the enamel organ. He has shown that the membrane is composed of two layers, the outermost being composed of large flattened epithelial cells, beneath which is a thin, translucent pellicle usually marked with hexagonal impressions derived from the ends of the enamel prisms. Mr. Tomes, who has been the principal advocate of the cementum theory, has, in a letter in a recent issue of the *Dental Record*, acquiesced in the views held by Mr. Paul.

STREET NOISES.

EASTBOURNE is once more to the fore in the suppression of street nuisances. This time newsboys were in trouble. Five or six shouting together were said to have been heard at a distance of 300 yards. Five of the lads were defended, it being argued that it was an idle suggestion that vendors of newspapers could not cry in the streets. The by-law was directed against continuous calling or shouting, and it was submitted that unless the shouting was deliberately and in such a manner as to cause annoyance there was no offence. The bench were of opinion that the by-law was reasonable and that there was no doubt the shouting—in one case it was 6 o'clock A.M.—was a nuisance. They expressed an opinion that this was more the case in a town where there were many invalids, such as Eastbourne; and, while discharging the lads with a caution, they hoped their employers would give them such instructions that they would not again get in trouble. We in London are still patiently awaiting legislation of this kind.

INTESTINAL IRRIGATION.

IN a paper in the *New York Medical Journal* of March 13th Dr. R. C. Kemp discusses the various uses of rectal irrigation and describes a double-current irrigator which he uses for this purpose. The apparatus is essentially the same as that of the ordinary rectal douche, with the addition of a double-current tube, which varies from four to fourteen inches in length, the latter size being flexible. This method, as the writer allows, is not novel, and it derives its chief interest from the fact that in Dr. Kemp's hands it has been made to serve a great variety of purposes and has on the whole fulfilled his expectations of its value as a means of treatment. As in using the ordinary enema, the patient's position is carefully adapted to the end to be served and the part of the colon to be reached by irrigation. A variety of mild antiseptic solutions are employed. Among the diseases said to have been thus treated successfully are, besides ordinary fæcal obstruction, colitis (simple and membranous), gastro-enteritis, dysentery, and typhoid fever. Shock, uræmia, and hæmorrhage appear to have been distinctly benefited by this means, warm, or in the last case hot, saline solutions being used. Relief has in like manner been afforded in cases of pelvic peritonitis, cystitis, and inflammatory trouble in the prostate and adjacent structures. By means of an apparatus which, like this, allows the return of the fluids injected irrigation can be so carried out that as much as several quarts may be passed into and more or less freely ejected from the colon. We observe that Dr. Kemp has used the irrigator very freely in such diseases as dysentery and typhoid fever, and apparently with advantage. We cannot but think, however, that in morbid conditions like these, associated with inflammation and usually also with ulceration, irrigation might easily be overdone and prove injurious. The purpose in view is antiseptic and so far logical, but it were surely best to limit the use of the douche to the early stages of these diseases and to, at most, a few occasions. Then, too, it should prove of especial value by removing septic and irritant matter and so reducing the dose of morbid poison in the bowel. Its administration under such conditions is certainly suggestive, and may very probably aid in abating the severity of the enteric disorder.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE.

THE festival dinner of this institution, over which the Duke of Connaught presided, at the Hôtel Métropole on Friday, April 2nd, cannot be said to have been a success if the amount subscribed on the occasion is not supplemented by further donations. The sum of £10,000 is urgently needed for the purpose of (1) re-arranging and enlarging the out-patient department, (2) the acquisition of an open space to be used as an airing court for male patients, (3) some improvement in the accommodation provided for the nurses, and (4) the completion of the building fund of the new country and convalescent branch at Finchley. Yet in spite of His Royal Highness's eloquent appeal the secretary was able to announce only the small sum of £3000 as a result of the dinner. As His Royal Highness said, "this hospital was started thirty-five years ago, and during this time it has steadily advanced in utility. It treats diseases which are exceptional and require exceptional treatment, and not only does it require that patients shall be kept in the hospital for three months or six months, but sometimes for a year, and even on the completion of that long time they are often unfit to take part in any of the public duties of a citizen. It is therefore of especial value that not only should inmates be treated for their terrible diseases, but that some proportion of them at least should receive pensions to enable them to live after treatment."

ADULTERATION. UNWHOLESOME FOOD, AND MARGARINE.

MATTERS connected with the purity of food-supply are coming very prominently before the public at the present time. This may be mainly accounted for by the strong efforts which are being made by certain of our legislators to push through the proposed new Food and Drugs Bill, which is to strengthen the hands of those entrusted with the duty of keeping our daily food free from objectionable admixture. There would be little difficulty in carrying out effectively the provisions of the present Act if all offences were of the remarkable character of an instance reported last week. Certain grocers in the Battersea district were convicted for selling as arrowroot an article containing 100 per cent. of borax, and as sago an article containing 100 per cent. of tapioca. The blame was attached to a young assistant (how often the young assistant is made the scapegoat) who had failed to distinguish the articles. The possibilities of this gross want of acumen on the part of the young assistant are

appalling. It is fortunate that he did not substitute something worse, although even in the case of borax mischief might have been done. In a district not far off a pastrycook was found premeditating the admixture of unsound condensed milk, which was totally unfit for the food of man, with certain other materials for the preparation of "pound" cakes. Some of the tins were without labels and "blown." It is evident that the tricks of unscrupulous persons have not been entirely suppressed, as some would have us believe. It is for those forms of fraud, which have now grown so ingenious, that the provisions of the new Act have been principally strengthened. The margarine fraud is one of them. The law very properly requires the seller to call margarine by its proper name, and to sell butter as everybody understands that term, without any admixture with foreign fats. No one can doubt the wholesomeness of margarine as a food, but when butter is demanded pure butter alone should be supplied. The margarine industry objects to certain clauses of the proposed new Act on grounds the logic of which we fail to see, and this position is well defined by a writer in the *Times* of April 2nd.

THE SALE OF POISONS.

THAT the law is not always logical was very well illustrated in a prosecution at Heywood last week, when a chemist and druggist was charged with selling poison—namely, strychnine—to a person unknown to him, and who was not introduced to him by a person of whom he had knowledge. A woman asked for rat paste, but he could not supply it, and instead gave her vermin killer. On her return journey home by train the woman swallowed the preparation, and death eventually took place. The defence was that rat paste was quite as deadly as vermin killer, but it did not come under the schedule of the Act. The defendant was convicted and fined ten shillings and costs. It is the same old story. The Act, in attempting to provide against the indiscriminate sale of poisons fails in a great measure because it is not sufficiently comprehensive or stringent. We have had more than enough evidence lately to prove the necessity of placing several poisons within the meaning of the Act that are at present not so classed. Apart from the injury done to the community, these omissions make it unnecessarily difficult for the pharmaceutical chemist to conduct his business comfortably and legitimately, since, there is reason to suppose, he is just as anxious to comply with the requirements of the law as any other erson. Still, in the present case the druggist committed an offence by neglecting to sell a scheduled poison in the prescribed way. The rat paste would have done the same mischief, but then he would have been free from blame. Bumble surely would have been right in his opinion of the law in this case.

"GAS BACILLI" AND PUTRESCENCE IN UTERO.

DR. G. W. DOBBIN reports a case of puerperal sepsis, due mainly, he considers, to the bacillus aerogenes capsulatus.[1] The patient, a multipara with generally contracted pelvis, had been in labour two days with a child of large size and was under the care of a midwife. On approaching the bed a sweetish, offensive odour was perceptible and the maternal genitals emitted a bubbling, crackling sound, whilst the vaginal discharge contained many gas bubbles. Delivery was accomplished with the Tarnier basiotribe, under chloroform. Immediately after it there was an explosive escape of sickening fœtid gas from the uterine cavity. There was as yet no tissue emphysema. Next morning "gas bacilli" were found in the tissues of the fœtus and in the placenta, and the same evening the mother died. A few hours later the body was enormously swollen and emphysematous all over. The fœtus and the placenta were likewise infiltrated with gas, which burnt with a flame when ignited, and was infested everywhere by the "gas bacilli" along with staphylococci and streptococci. The placental bloodvessels contained gas cysts surrounded by a zone of these bacilli, cultures of which were made. A pigeon and a rabbit were inoculated and rapidly developed an œdematous emphysema. These observations are in accord with those of Welch and Nuttal,[2] who attributed many cases of supposed entrance of air into the uterine sinuses to this parasite. They also found that this bacillus when inoculated into rabbits was not usually fatal, but that if the animal were then killed the micro-organism developed rapidly with abundant formation of gas in all organs. Dr. Dobbin argues that in his case the bacilli were introduced by the nurse; that they found in the dead fœtus, as in the dead rabbit, a suitable nidus, and filled the uterine cavity with putrid gas; and that the mother died not infected by the bacilli, but poisoned by the toxins produced by them, her own macerated vaginal tissues, moreover, acting as a seat of germ development. Whether this explanation be in all points correct or not, the case itself should serve to accentuate the danger of delay in cases of prolonged and difficult labour.

[1] Johns Hopkins Hospital Bulletin, February, 1897.

DEATH UNDER NITROUS OXIDE AND ETHER DURING A DENTAL OPERATION.

AN occurrence so unusual requires careful examination. Has the feeling of security which has grown with regard to this combination since Mr. Clover first introduced it into common practice been a delusion, or is some explanation at hand? The report of the death from a lay contemporary[1] states the facts as follows. The patient, a woman aged twenty-nine years, had been a nurse and was an able-bodied woman free from organic disease, but as she suffered from neuralgia the removal of several stumps and teeth was considered advisable. Mr. Arthur Vernon Evans, M.R.C.S., L.R.C.P., administered nitrous oxide gas and ether, and "about one and a half drachms" of ether were used. We may presume that an inhaler was employed. The dentist had removed three teeth, when Mr. Evans observed that the patient's face changed colour and that the pulse ceased. Prompt removal from the chair and the performance of artificial respiration with hypodermic injection of strychnine failed to restore animation. Death, it was thought, took place three minutes from the appearance of collapse. A necropsy was made, which showed the organs to be uniformly healthy. It seems hardly likely that ether played any part in the catastrophe. The inhalation of about ninety drops would produce an almost inappreciable effect. There appears little doubt that the case was one of simple cardiac syncope occurring during the state of recovery from a light anæsthesia. The assumption, which appears in the evidence, that nitrous oxide acts as a cardiac depressant is, of course, not generally admitted, and, as is well known, syncope under that agent is most rare. What happens in some cases is that an impediment to expiration exists—such, for instance, as the forcing back of the tongue during the extraction of lower teeth, dropping of the jaw, or the faulty position of the patient's head, and this leads to the patient being unable to rid the circulation of the gas which has been inhaled. This will produce syncope and death. The danger of such a proceeding has only to be pointed out to be avoided. It is no exaggeration to say that nitrous oxide gas has been given many millions of times and with impunity, and is being

[2] Ibid., August, 1892.
[1] The *Windsor and Eton Express*.

so given thousands of times daily. Perfection in anæsthetics has yet to be found, but it may fairly be claimed for nitrous oxide that it has stood the test of time well and may still claim for its title "the safest of anæsthetics." It must be understood that nitrous oxide anæsthesia is not asphyxia; the one condition is associated with increased vigour of the heart's action, the other rapidly leads to paralytic distension of the blood-vessels owing to impeded circulation through the lungs.

THE PLAGUE ON BOARD A BRITISH TRANSPORT.

THE *Dilwara*, hired transport, bringing troops from India, arrived at Southampton on April 6th. This is the vessel on which a case of fatal plague occurred on March 18th. On reaching Suez the persons who had been in immediate contact with the deceased child were landed at Moses' Wells, disinfection was carried out, and the vessel was allowed to pass through the Suez Canal in quarantine—that is to say, with guards on board to prevent communication with the land on either side. Before the arrival of the ship at Southampton Dr. Bulstrode, of the Medical Department of the Local Government Board, went down to Southampton to confer with Mr. Harris, the port medical officer of health, and to arrange with the naval and military authorities as to the landing of some 1200 men, women, and children on board, and he remained there to watch the disembarkation of the troops, &c. All necessary arrangements were completed before the arrival of the vessel, and, in accordance with English practice, no persons were detained, since all were healthy on arrival. The arrangements at Southampton, which are largely due to Mr. Harris's admirable initiative, sufficed for all purposes; and since no fresh cases had occurred on board nothing but medical inspection and certain measures of disinfection were necessary. This case proves anew how easy it is, with proper sanitary administration and healthy conditions on board, to deal with and to prevent recurrences of plague, and it also justifies the action laid down by the Local Government Board in dealing with this disease, which was formerly subject to quarantine at our ports. This is the third vessel reaching an English port in which there has been plague derived from Bombay, and in no case has there been any extension of the disease.

A CLINICAL meeting of the Neurological Society of London will be held at the rooms of the Medical Society, 11, Chandos-street, W., on April 22nd, at 8.30 P.M. Members wishing to show cases are invited to communicate with one of the hon. secretaries, Dr. F. W. Mott and Dr. J. S. Risien Russell, as soon as possible, and are requested to send to 4, Queen Anne-street, W., very short abstracts dealing with the salient features of the cases.

THE Hospital Reform Association will present its memorial against hospital abuse to the Royal College of Physicians of London in a few days' time, so that members of the profession are invited to sign it without delay. At the meeting of the Council of the Association held on April 1st it was decided to prepare a memorial on hospital reform for presentation to H.R.H. the Prince of Wales.

UNDER the auspices of the American Surgical Association and the Alumni Association of the Jefferson Medical College of Philadelphia the statue of the late Professor Samuel D. Gross, M.D., will be unveiled near the Army Medical Museum, Washington, D.C., on Wednesday, May 8th, 1897.

INFANTILE MORTALITY IN EGYPT.

A CORRESPONDENT, who has been examining the weekly statistical returns issued by the Egyptian Sanitary Department, has tabulated a summary of the facts relative to the deaths of children during each quarter of the year 1896; and the results, which are shown below, may be correctly described as appalling.

Place.	Quarter of 1896.	Deaths. Under 1 year.	1 to 5 years.	Over 5 years.	Percentage. Under 1 year.	Percentage. Under 5 years.	Remarks.
Cairo.	First ...	1194	1216	1710	29·0	58·5	Deaths from cholera excluded.
	Second ...	1763	1922	1861	31·8	66·4	
	Third ...	2052	1378	1605	40·7	68·1	
	Fourth ...	1239	1305	1593	29·9	61·4	
	Total ...	6248	5821	6769	33·2	64·0	
Alexandria.	First ...	588	469	819	31·3	56·3	Ditto.
	Second ...	769	559	859	35·1	60·7	
	Third ...	1031	601	744	43·3	68·6	
	Fourth ...	822	581	766	37·8	64·6	
	Total ...	3210	2210	3188	37·2	62·9	
Eighteen towns in Lower Egypt.	First ...	772	590	1129	30·9	54·6	Deaths from cholera included.
	Second ...	1075	1072	1696	27·9	55·8	
	Third ...	1495	1643	2173	28·1	59·0	
	Fourth ...	935	1166	1259	28·4	62·8	
	Total ...	4307	4471	6257	28·6	58·3	
Eleven towns in Upper Egypt.	First ...	624	383	857	33·4	54·0	Ditto.
	Second ...	838	818	1280	28·5	56·4	
	Third ...	886	945	1727	24·9	51·4	
	Fourth ...	842	820	788	34·3	67·8	
	Total ...	3190	2966	4652	29·5	56·9	

The unavoidable inclusion of the cholera deaths in the portion of the table referring to the provincial towns has the effect of making the infantile death-rate appear to be more favourable than was actually the case, for judging by Cairo and Alexandria the number of young children carried off by the epidemic must have been comparatively small; but even as they stand the figures represent a terrible preponderance of premature mortality, no fewer than sixty out of every hundred burials having been of children under five years of age. Compared with the births this slaughter of the innocents comes out in, if possible, a worse light, as will be seen by the subjoined table.

Deaths per 1000 Births.

—	Cairo.	Alexandria	Eighteen towns in Lower Egypt.	Eleven towns in Upper Egypt.
Under one year ...	237	279	241	273
One to five years	267	192	250	254
Total	554	471	491	527

In the former table one of the most noteworthy features is the progressive increase in the mortality up to the end of the third quarter. It is not until the Nile rises and washes away the impurities that the death-rate begins to diminish.

THE HOSPITAL REFORM ASSOCIATION.

REPORT OF THE COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON.

To the Council of the Hospital Reform Association.

GENTLEMEN,—In pursuance of your instructions to inquire into the working of the special hospitals of London we have personally visited forty-one institutions, which has necessitated about eighty separate visits, besides numerous letters. We herewith append in tabular form the specific details required of these institutions. In the following remarks we abstain as far as possible from mentioning individual institutions. Unless otherwise specified, all the details in the table are taken from the published hospital reports for the year 1895. With few exceptions we were well received and the information for which we asked was readily given. We have nearly always interviewed the secretaries, and in some cases we have also seen members of the visiting staff or officials in charge of the out-patient departments. In many cases the secretaries recognise the possibility of abuse; in very few instances was its existence absolutely denied. It should be borne in mind that in all cases our information has been obtained from interested parties. There are several points to which we wish to draw attention in detail.

1. *Subscribers' letters.*—Out of the forty-one hospitals ten do not issue letters, and of the remaining thirty-one only six rigidly enforce their use. Some of the smaller institutions appear to use letters to enable them to obtain a grant from the Hospital Saturday Fund.

2. *Payment by patients.*—Thirty-two hospitals receive payment from their patients, collecting a large sum annually (£24,085 in 1895). We would point out that this amount is earned entirely by the work of the medical staff, who receive no portion in return. More than half (eighteen) of these institutions obtain more money from their patients than from their annual subscribers; in some cases as many as from ten to twenty-five times as much. On comparing the patients' payments and annual subscriptions for these thirty-two hospitals we find that these received £7000 more in patients' payments than in annual subscriptions in 1895. We cannot refrain from drawing attention to the fact that at one institution the average sum received for treatment from each paying out-patient is 11*s.* 9*d.* The payments are often made to subordinate officials, and no register or check is kept.

3. *Inquiry as to the means of patients.*—At fifteen of these institutions there is practically no inquiry at all, patients being admitted unquestioned, so that anybody may apply for, and will as a matter of course receive, treatment. Where an inquiry exists it is for the most part inefficient and wrongly directed. It partakes, as a rule, of one of two characters, either (*a*) How much can the patient pay the hospital? or (*b*) Can the patient pay a specialist's fee of one or two guineas? In neither instance is the patient asked if he or she could afford to pay the fees of a general practitioner. The inquiry is usually of a most cursory nature; the word of the patient is accepted, and no steps are taken to verify the statements. In other cases we found that although the letters contained spaces for the insertion of wages, means of livelihood, rent, &c., these particulars were neither filled in nor the questions asked. At some hospitals it appeared to be the custom to put upon the medical staff the duty of deciding the eligibility of the patients. We consider this to be unfair and unadvisable. This work is obviously outside the duty of the visiting staff, who as a rule have much more to get through than they can conscientiously do in the time at their disposal. Besides, it involves a personal element. If a medical man tells a patient he can afford to pay a practitioner it is equivalent to saying to the patient, "You can consult me at my own house." Even at those hospitals which profess some form of inquiry it is unusual to ask any questions of patients bringing a subscriber's letter for fear of offending the subscriber, and still rarer of those patients bringing letters from the Hospital Saturday Fund. We had repeated statements from the hospital secretaries as to the unsuitability of many of these latter patients for hospital treatment.

4. *Limitation to the speciality for which the hospital nominally exists.*—This limitation is fairly well enforced. However, at some chest hospitals large numbers of cases of anæmia and dyspepsia are treated; the Cancer Hospital treats abscesses, syphilis, and piles; and at women's hospitals generally the cases are by no means all obstetric in character.

5. *Limit to the number of new cases in the out patient department.*—Only two have a fixed limit. In the majority the attendance is small, but there are undoubtedly cases of overcrowding. The new patients on one day at the following hospitals are: No. 11, occasionally fifty; No. 22 an average of from thirty to forty; No. 3, from thirty to fifty; No. 10, from twenty-five to thirty; and No. 6, from twenty to thirty. Many of the cases treated at these special hospitals are of a common nature, could be suitably treated by a general practitioner, and do not require the skill of a specialist. For example, at ophthalmic hospitals a large proportion of the cases are ophthalmia and common diseases of the eyelids; at skin hospitals, pediculi, scabies, and ringworm; at chest hospitals, anæmia and dyspepsia; and so on.

We are of opinion that considerable abuse exists among these special hospitals in the following ways: (1) by the treatment, either free or for a small sum, of patients who could afford to pay a reasonable fee outside; (2) by the admission of patients who do not actually require treatment by a specialist; and (3) by the treatment in some instances of more patients in a given time than can be considered either advisable or defensible.

Recommendations.—In attempting to recommend what course should be adopted by the association as a remedy for the present state of things we are confronted at the outset by a very serious difficulty. The majority of these hospitals would cease to exist were it not for the payments they receive from their patients. A rigid inquiry and the consequent rejection of many patients would so seriously diminish the receipts that some at least of these institutions would be unable to keep open. It is, therefore, *primâ facie* improbable that we shall receive much support in this direction from the hospitals themselves. We recommend that each of these hospitals be asked to appoint an inquiry officer. We recognise the importance of this post being held by a reliable and suitably paid individual. In view of the necessary cost we recommend that hospitals in one locality—or, better still, the hospitals with the same speciality—should combine to support a joint inquiry officer, who shall devote his or her whole time to the work. We recommend that a wage limit be fixed for out-patients, say, 30*s.* a week for a single person and 50*s.* for married people. Some deviation from this rule might be allowed at the discretion of the inquiry officer in cases of a lingering character such as phthisis, or in cases requiring a long course of special treatment. In no instance should an able-bodied person living on his or her private means be admitted as an out-patient to any hospital. We recommend that an appeal be made to the management of the Hospital Saturday Fund asking them to exercise more care in the bestowal of their letters and to exclude as far as possible persons in a position to pay fees. We consider that much might be done if the medical staffs could be induced to take an active interest in the subject of abuse. It is probable no hospital committee would continue to act in opposition to the unanimous views of the staff, provided such views were strongly and persistently laid before them. We therefore recommend that a letter be sent to every member on the staffs of these hospitals asking them to take an interest in this question, and pointing out (*a*) the pauperisation of the patients through the present abuse, (*b*) the serious injury they are doing to their fellow practitioners, and (*c*) the large amount of money they are earning of which they receive nothing.

Subscribers' letters.—We have pointed out that out of the forty-one hospitals ten do not have letters. These do not appear in consequence to suffer any loss in public support, for the average amount of their annual subscriptions is £743, as contrasted with £758, the average annual income from subscriptions returned by the others. At most institutions patients bringing subscribers' letters are admitted unquestioned, and it is certain that large numbers of undeserving cases gain admission in this way. As only six out of the remaining thirty-two hospitals rigidly enforce the use of their letters it is probable that no very serious objection would be raised to the total abolition of the letter system. At any rate, we trace the worst instances of abuse to this system, and we would therefore strongly recommend its total abolition.

Many hospital secretaries have expressed the opinion to

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No.	Name of hospital and number of beds.	Subscribers' letters.	Payment by patients.	Inquiry as to patients' means.	Limitation of cases for special treatment.	Limit to number of new out patients.	Patients' payments in 1895.	Annual subscriptions in 1895.	Remarks.
1	Hospital for Skin Diseases, Blackfriars (10 beds).	Out-patients: Yes, about one-quarter. In-patients: Admitted through out-patients.	Out-patients: 1s., 2s. 6d., and 10s. per two months; £490 a year. In-patients: 10s. a week; £59 a year.	Dispenser inquires as to how much a patient can pay.	Limited.	None; average 10.	£ 549	£ 155	There is little or no inquiry into the circumstances of patients. The patients' payments are three and a half times the annual subscriptions.
2	London Skin Hospital, Fitzroy-square (11 beds).	Out-patients: Yes, very few. In-patients: Yes, not enforced.	Out-patients: about 1s. weekly (from 3d. to 2s. 6d.) £636 a year. In-patients: No free beds; 15s. a week; also from £1 1s. to £4 4s. weekly; £204 a year.	The secretary states that he sees all patients and inquires; often rejects one or two a week.	Out-patients: Limited. In-patients: Staff are at liberty to send other cases into private wards.	None; average 3 or 4.	840	122	Questions openly answered by secretary. A fair attempt is made to prevent abuse. The patients' payments are seven times the annual subscriptions.
3	St. John's Hospital for Diseases of the Skin (40 beds).	Out-patients: Yes, the majority. In-patients: Yes.	Out-patients: If no letter, from 1s. to 2s. 6d. weekly, or 10s. a month, privileged cases; £2263 a year. In-patients: 15s. weekly; £105 a year.	All are seen by a clerk, who refers to the secretary doubtful cases, and he frequently rejects.	Limited.	None; average 20 (50—50).	2368	773	The secretary willingly answered questions and appeared to be doing his best to stop abuse according to the views of his committee. The report for 1896 states that £2263 were received from 3857 patients, which gives 11s. 9d. per head. The patients' payments are three times the annual subscriptions.
4	Western Skin Hospital, Great Portland-street (no beds).	Yes, very few; only necessary if unable to pay 1s. or more per week.	Without letter free, or 1s. or 2s. (rarely 10s.) weekly; £144 a year.	The secretary sees and inquires what they can afford to pay; refused two patients in fifteen years.	Limited.	None; average 3.	144	42	Questions freely answered. A patient unable to pay a fee of 1 or 2 guineas would not be considered abusing the charity by paying 10s. The patients' payments are more than three times the annual subscriptions.
5	British Hospital for Diseases of the Skin, Euston-road (12 beds).	Yes; not enforced.	Yes.	None.	—	None.	860	35 and donations	We had the greatest difficulty in obtaining any particulars of this institution. We explained the object of our visits to the officials, who refused us verbal information, and told us to write. When we wrote to the secretary, and afterwards to the members of the staff, we received no reply. When we called again the lady official at the desk refused to send in our card to the member of the staff who was in the hospital at the time. We, however, obtained a report from which we find that patients' payments amount to nearly twenty-five times as much as the annual subscriptions and donations put together.
6	Central London Ophthalmic Hospital, Gray's-inn-road (13 beds).	Out-patients: Yes, about half. In-patients: Yes.	Out-patients: 2d. a visit to 2s. 6d. per month; £426 a year. In-patients: All expected to pay 1s. a day, occasionally £1 a week; £30 a year.	"Inquiry officer" fills in forms, &c., and if he thinks proper brings the patients up to the secretary to be inquired into; has no power himself to question.	Limited.	None; average from 30 to 50.	456	104	Inquiry officer only in name. The report says more than half of the income is derived from patients; four times the annual subscriptions.
7	Royal Eye Hospital, St. George's-circus (40 beds).	Out-patients: Yes, about 1 in 100. In-patients: Admitted through out-patients.	Out-patients: None. In-patients: None. A few at £1 1s. weekly, and four beds at £3 3s. weekly; £318 a year.	The clerk inquires as to the occupation, &c., of out-patients, and occasionally refers to the secretary, who has the right of refusing.	Limited.	None; average 25.	318	344	The secretary was very willing to answer questions, and appeared to be doing her best to prevent abuse.
8	Royal London Ophthalmic Hospital, Moorfields (100 beds).	Out-patients: Yes, about 1 in 20. In-patients: Ditto.	None.	An inquiry officer sees all and refuses more than one a day; the inquiry here even extends to those sent by the Hospital Saturday Fund.	Limited.	None; very large.	318 (boxes)	817	Some care is obviously taken to prevent abuse; the system of inquiry here appears to be good.

	Moorfields (100 beds).	Ditto.		Out-patients' letters, if any, are sent to the secretary. In-patients: Inquiry is made by the secretary's clerk, the inquiry here even extends to those sent by the Hospital Saturday Fund.					

9	Royal Westminster Ophthalmic Hospital (30 beds).	None.	Out-patients: None. In-patients: None. One bed at £2 2s. weekly; £73 a year.	A clerk sees all and enters occupation, and occasionally refuses.	Limited	None; average 15 to 20.	73	752	The secretary denied the existence of abuse. If the inquiry is thorough it should check serious evil.
10	Western Ophthalmic Hospital, Marylebone-road (12 beds).	Yes, a minority.	Out-patients: No regular payment—an open bowl on secretary's table. In-patients: None.	Assistant secretary sees all and rejects if earning 30s. a week single or 50s. a week married.	Limited.	None; average from 25 to 30.	118 (boxes)	223	No separate heading in accounts for patients' donations, and no register of these is kept. During 1895 1315 cases of ophthalmia were treated; most of these probably did not require a specialist's advice. The report also states that all are admitted without unnecessary formalities.
11	Hospital for Consumption and Diseases of the Chest, Brompton (321 beds).	Rigidly enforced.	None.	Out-patients: Practically none; sister sees all cases and is supposed to refer wealthy patients to the secretary. This is a very rare occurrence; the secretary could not say if it had occurred once during 1896.	Apparently no restriction; the visiting staff has power to see or refuse any case other than chest disease.	None; average from 30 to 40, occasionally 50.	26 (boxes)	7784	Many patients come up from the country. The visiting staff have to attend at noon to enable these privileged people to return to their distant homes the same day. The secretary considered that a patient who persistently gave up a day's work and came from the country and paid from 5s. to 10s. in railway fares was a deserving case for the charity. Practically no inquiry is made; the subscriber who gives the letter is considered responsible.
12	Infirmary for Consumption and Diseases of the Chest and Throat, Margaret-street (no beds).	Rigidly enforced.	None.	None.	Unlimited.	None; average 10.	—	122 and donations	Questions willingly answered.
13	National Hospital for Diseases of the Heart and Paralysis, Soho-square (26 beds).	Out-patients: Yes; about half. In-patients: Yes, with payment.	Out-patients: With letter, free; without 6d. or 1s.; £137 a year. In-patients: All pay; children 5s., and adults from 10s. to £2 2s. weekly; £170 a year.	The secretary inquires and gives special forms to be signed by clergyman or minister in doubtful cases.	All admitted; selection left to staff.	None.	307	958	Questions readily answered; system should be fair if efficiently carried out, but patients come from all parts.
14	North London Hospital for Consumption, Fitzroy-square.	Strictly enforced.	Out-patients: None. In-patients: Occasionally £1 1s. weekly, not encouraged; £38.	Out-patients: None. Seen by clerk; no questions asked; left to subscribers.	Not strictly limited.	None; average 12.	38	1616	No very obvious abuse; the patients all appeared to be poor.
15	Royal Hospital for Diseases of the Chest, City-road (80 beds).	Rigidly enforced.	None.	Out-patients: No inquiry officer; there was one formerly. The visiting staff are at liberty to refer any patient to the secretary. In-patients: None. Subscribers' letters state that patients are without the means of paying for proper medical advice and comforts.	Left to visiting staff.	Yes, 15.	111 (boxes)	2218	Questions very readily discussed by the secretary, who considered less abuse existed than formerly, because the staff were more alive to the fact.
16	Chelsea Hospital for Women (52 beds).	Out-patients: Yes, about three-quarters. In-patients: Yes, rather more.	Out-patients: If no letter, 1s. a week; £263 a year. In-patients: Without letter, 10s. 6d. to £2 2s. weekly; £211 a year.	Out-patients: Clerk inquires and refers doubtful cases to the secretary; this happens daily, and about one-half of these are sent away. In-patients: Some inquiry.	Limited.	None; average from 10 to 25.	474	1635	The secretary answered questions openly and realised the possibility of abuse, and makes a fair attempt to cope with it.
17	The Hospital for Women, Soho-square (60 beds).	Out-patients: None. In-patients: Yes.	Out-patients: None. Contribution box by dispensary; £99. In-patients: Free; 10 beds at £1 1s. a week, £469.	Out-patients: None. In-patients: Have to send a special form signed by a magistrate, clergyman, minister, or medical man.	Out-patients: Sister inquires, and then usually consults visiting staff as to seeing other cases.	Yes, 20.	573	1257	If the in-patient forms are honestly filled up there should be no abuse of this department; as, however, the out-patient department is "perfectly free at 10 o'clock daily, disease and poverty being the only passport required," and no questions are asked. The secretary did not consider there was much abuse. The out-patient sister thought that most patients could quite well pay.

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No.	Name of hospital and number of beds.	Subscribers' letters.	Payments by patients.	Inquiry as to patients' means.	Limitation of cases for special treatment.	Limit to number of new out-patients.	Patients' payments in 1895.	Annual subscriptions in 1895.	Remarks.
18	Grosvenor Hospital for Women and Children, Vincent-square (50 beds).	Rigidly enforced.	Out-patients: All pay, from 6d. to 1s.; £170 a year. In-patients: From 5s. to £1 1s. weekly; £173 a year.	Out-patients: None with letters. Some inquiry if without.	Not limited to gynæcological cases.	None: average from 10 to 15.	£ 344	£ 504	The patients are seen by the lady visitors, who fill in letters as to name, &c. Spaces in letters for rent and means of livelihood are left blank; no questions are asked. The hospital is being rebuilt.
19	Royal Hospital for Children and Women, Waterloo-road (52 beds).	Rigidly enforced.	Out-patients: 1d., £127 a year. In-patients: From 1s. a week, £132 a year.	Out-patients: Sister inquires and refers to the secretary or medical officer, who refuses if thought necessary, which seldom happens. In-patients: Not admitted without a medical man's certificate.	Limited.	None; average 25, occasionally 50.	259	793	The secretary thought that abuse existed in all out-patient departments. We consider under the circumstances that so few patients are sent away that abuse exists.
20	Samaritan Free Hospital for Women and Children (53 beds).	None.	None.	Out-patients: Children, none; adults, space on letters for rent and means of livelihood. (We do not know if these are filled in.) In-patients: Fairly full particulars are requested.	—	None.	8 (boxes)	1615	The secretary was very polite, but did not wish to answer questions without the special consent of his committee. We were unable to ascertain that any real inquiry was made.
21	Central London Throat, Nose, and Ear Hospital, Gray's-inn-road (17 beds).	None.	Out-patients: 6d., 1s., and 2s. 6d; £1136 a year. In-patients: Majority free; 14s. weekly; £176 a year.	The secretary sees all and fills in forms, rejecting about fifty a year.	Limited.	None; average 25.	1322	318	Questions were openly answered and every facility for inquiry offered. The secretary did not think as much abuse existed as formerly and appeared very anxious to avoid it. About one-seventh of the patients are recommended by medical men, and many come from a distance. The payments from patients amount to four times the annual subscriptions.
22	Hospital for Diseases of the Throat, Golden-square (26 beds).	Out-patients: Yes, about one-eighth. In-patients: Rather less.	Out-patients: With letter free; without from 1s. to 2s. 6d. weekly; £2486. In-patients: With letter free or payment of 10s. weekly, 2s. 6d. to 25s. weekly; £372 a year.	Out-patients: The clerk inquires and refers to secretary; a daily occurrence. In-patients: Secretary sees.	Limited to throat, nose, and ear, including enlarged glands, goitre, &c.	None; average from 30 to 40.	2858 (In 1894)	286 (In 1894)	It appears the question here asked is whether a patient can afford a specialist's fee of from one to two guineas a visit. The patients' payments are nearly ten times the amount of the annual subscriptions.
23	London Throat Hospital, Great Portland-street (5 beds).	Out-patients: Yes, about one-third. In-patients: Admitted through out-patients.	Out-patients: With letter free; without, expected to pay from 1s. to 2s. 6d. weekly. In-patients: About 5s. weekly; £737 a year.	Left to visiting staff.	Limited.	None; average 20.	737	118	A proper system of inquiry is absent. The patients' payments are six times the amount of the annual subscriptions.
24	Metropolitan Ear, Throat, and Nose Hospital, Fitzroy-square (no beds).	Yes, about one-eighth.	From 2s. to 5s. per visit, occasionally £1; £101 a year.	None.	Left to the visiting medical officer.	None.	101	11	There was considerable hesitation on the part of the secretary in replying to questions. The medical officers are allowed to see private patients at the hospital. We were unable to ascertain who decided which were private and which were hospital cases. Many come from the country and can have their medicine repeated by post. The subscribers' letters apparently exist to gratify the Hospital Saturday Fund. The patients' payments amount to ten times the sum of the annual subscriptions.
25	Royal Ear Hospital, Frith-street, Soho (9 beds).	Out-patients: Yes, about a quarter. In-patients: A few.	Out-patients: 1s. per visit; £468 a year. In-patients: From 5s. to 12s. weekly; £127 a year.	Lady secretary inquires, and refuses unsuitable cases.	Limited.	None; average 15.	595	79	We saw no evidence of any very great abuse, but patients' payments amount to nearly eight times the sum of the annual subscriptions.

26	Municipal Throat and Ear Infirmary, City-road (no beds).	—	—	—	—	—	280	—	No report is published. This appears to be a private concern, and, we presume, patients pay the medical officer.
27	Hospital for Epilepsy and Paralysis, Regent's Park (25 beds).	Out-patients: Yes, if unable to pay 6d.; about one-half have letters.	Out patients: With letter, free; without, pay from 6d. to 2s. 6d. weekly; £226 a year. In-patients: About half pay from 5s to 10s. weekly; private wards from £1 11s. 6d. to £3 3s. weekly; £406 a year.	Out-patients: Dispenser sees and questions, and occasionally refers to secretary.	Out-patients: left to visiting staff. In 1895, 41 cases other than nervous were treated. In-patients limited.	None; average from 2 to 3.	632	380	The secretary was very courteous and quite alive to the possibility of abuse, but could not suggest any improvement except an inquiry officer or reference of all metropolitan cases to the Charity Organisation Society. The patients' payments are considerably more than the annual subscriptions.
28	National Hospital for the Paralysed and Epileptic, Queen-square (180 beds).	Out-patients: Yes; less than one-half. In-patients: None; many admitted through out-patients.	Out-patients: None. In-patients: Free, or £1 1s. weekly (32 beds); also private wards, from £3 3s. to £5 5s. weekly; £1799 a year.	Out-patients seen by steward, who possibly refers to the secretary; this may happen once or twice a month. In-patients have to get letter signed of inability to pay for adequate medical treatment.	Limited; registrar selects.	None; average 15 (from 10 to 30).	1799	1761	Information not readily given. The secretary considered his institution differed from all others and was not a public body, and no one had any right to interfere with it. More money is received from the in-patients alone than in annual subscriptions.
29	West-end Hospital for Diseases of the Nervous System and Paralysis, Welbeck-street (50 beds).	Out-patients: Yes; about one-half. In-patients: Yes; if free.	Out-patients: With letter, free; without, from 1s. to 5s. weekly; £354 a year. In-patients: With letter, free; without, from 3s. 6d. to £1 weekly; £120 a year.	The secretary sees all patients and questions as to means; often rejects two a week; he never questions those with Hospital Saturday Fund or Hospital Sunday Fund letters.	Left to visiting staff.	None; average 7 or 8, occasionally 20.	474	800	There is a good attempt at inquiry, and with the exception of those with Hospital Saturday Fund and Hospital Sunday Fund letters, abuse to any extent can only exist through deceit.
30	British Hospital for Mental Diseases and Brain Disorders, Euston-road (no beds).	A few bring letters; all have to get them.	None.	The secretary sees all and makes inquiries, and in doubtful cases tells patients to bring a letter from a clergyman stating poverty, &c.	? Limited.	None; average from 6 to 8.	—	—	No report had been issued since 1894.
31	City Orthopædic Hospital, Hatton Garden (30 beds)	None.	Out-patients whose wages are over £2 are expected to put 2s. 6d. in the box for two months. In-patients: Free, and six beds at £1 1s. weekly; £6 6s.	The secretary sees all cases and fills in letters with occupation and income; if he has any doubt he refers case to the Charity Organisation Society (about five or six a year).	Limited.	None; average 6.	19	416	The secretary appeared willing to give all information. We should have considered it hardly worth the secretary's time to note the very small amount represented as received from patients.
32	National Orthopædic Hospital, Great Portland-street (60 beds).	Out-patients: Yes; but very few are brought. In-patients: Yes.	Out-patients: None. In-patients: 7s. 6d. under twelve years of age, and 10s. 6d. over twelve weekly; £1001 a year.	Out-patients: Matron sees personally all cases and makes inquiries; refuses herself or refers to the secretary.	Limited.	None; average from 6 to 10.	1001	349	Questions very openly answered. Apparently every precaution to prevent abuse is taken, the possibility of which is most fully recognised.
33	Royal Orthopædic Hospital, Oxford-street (50 beds).	Out-patients: Yes, majority bring or have them given. In-patients: Yes, not enforced.	Out-patients: None; £16 in boxes. In-patients: Free or pay from 2s 6d. to 10s. weekly; £107 a year.	Out-patients registered by porter, seen by surgeon, who can refer to secretary, who refuses about one a month.	Limited.	None; average 2 or 3.	123	540	Questions very openly answered. The secretary has put in letters that "Patients may be called upon to furnish such information as will enable the authorities to judge of their eligibility for charitable relief."

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No.	Name of hospital and number of beds.	Subscribers' letters.	Payments by patients.	Inquiry as to patients' means.	Limitation of cases for special treatment.	Limit to number of new out-patients.	Patients' payments in 1895.	Annual subscriptions in 1895.	Remarks.
							£	£	
34	St. Peter's Hospital for Stone and Urinogenital Organs, Covent-garden (26 beds).	Out-patients: Yes, very few. In-patients: None; admitted through out-patients.	Out-patients: With letters, free; without, 6*d*., 1*s*., or 10*s*.; £1947 a year. In-patients free; £54; two beds at £5 5*s*. a week, £285 a year.	Out-patients: Secretary sees and questions, and possibly refuses fifty a year.	Left to surgeon.	None; average 12.	2186	250	Questions freely answered. Nearly £2200 a year received from patients, more than three times the annual subscriptions and donations together; probably much abused.
35	Gordon Hospital for Fistula, Piles, and Diseases of the Rectum (20 beds).	No regular subscribers' letters.	Out-patients: Free; box, £68 a year. In-patients: Nearly all pay from 2*s*. to £3 3*s*. weekly; £759 a year.	Out-patients: None; left to visiting staff. In-patients inquired very fully into by secretary, who refuses about two a year, and keeps a very complete detailed record.	Left to surgeon.	None; small	827	143	Questions most openly answered and fullest facilities for inquiry given. We doubt if there is much abuse with the in-patients; as, however, there is no inquiry with the out-patients there appears to be considerable abuse of this department. The patients' payments are nearly six times the annual subscriptions.
36	St. Mark's Hospital for Fistula, City-road (34 beds).	None.	Out-patients: None; boxes, £42 a year. In-patients: None.	Practically none.	Hospital surgeon selects.	None; average 12.	42 (boxes)	306	In the absence of any genuine inquiry abuse must exist, probably to a considerable extent.
37	Lock Hospital and Rescue Home (135 beds).	None.	Out-patients: Pay 2*d*., 6*d*., 1*s*. up to 5*s*. per visit; £1422 a year. In-patients: None.	Out-patients: The secretary, clerk, or dispenser inquires, and has the right of refusing. In-patients: No inquiry; usually recommended by clergymen or medical men.	Strictly limited.	None.	1422	75	We could get no direct evidence of abuse by the out-patients; but it probably exists. The majority of in-patients come from all parts of the country without any inquiry, so it is difficult to believe that no abuse exists. The out-patients' payments are over eighteen times the annual subscriptions.
38	Dental Hospital of London, Leicester-square (no beds).	Yes.	None; have to pay for extra gold for stopping; £239 a year.	None.	Limited.	None.	305	1121	There is an appliance department where very strict inquiry is made and no abuse exists, but, as all subscribers' tickets are admitted without inquiry, abuse must exist, especially as a large school is attached, and students naturally prefer clean to dirty people.
39	National Dental Hospital, Great Portland-street (no beds).	Yes; the majority.	With letter, free; without, free or pay 2*s*. 6*d* for gas or gold stopping; £1113 a year.	Porter sees all, and has power to refuse. This occasionally happens. No inquiry of those with letters.	Limited.	None; often from 70 to 100.	1113	126	The inquiry does not appear very efficient; only the wealthy classes refused, if found out. Hospital practically self-supporting. Notices to the effect that the hospital is only for the necessitous poor are put up. Patients' payments are eight times the annual subscriptions.
40	Friedenheim, or Home for the Dying (40 beds).	None.	In patients: Most free or pay from 2*s*. 6*d*. to 10*s*. weekly; occasionally £1 1*s*.; £308 a year.	Certificate by attending medical man has to be sent in.	Cases have lived four years.	—	308	511	No evidence of abuse.
41	Cancer Hospital, Fulham (105 beds).	None.	None.	—		—		1994	The secretary refused to be interviewed and also to answer our questions when sent by post. We have no particulars of out-patients. Cases other than cancer are treated as in-patients in large numbers, such as piles, fistulæ, tuberculosis, syphilis, abscess, &c. In fact, according to the report, only rather more than half the patients are acknowledged to be suffering from diseases of a cancerous nature. We consider it unfortunate that an institution which appeals to the public as a cancer hospital and receives, we believe, donations and legacies for this reason should treat other conditions.

us that the amount of the specialist's fee for private consultation often conduces to instances of abuse of the special hospitals. Thus numbers of patients who pay the hospitals as much as from 5*s*. to 10*s*. are unable to pay 1 or 2 guineas to the medical man at his own house. With reference to this we fail to see any very strong objection to institutions acknowledged to be on a business and not on a charitable basis. In such institutions patients *bringing an introduction from their general practitioner* (this we regard as essential) might obtain a specialist's advice on the payment of a small sum, say, from 5*s* to 10*s*., a portion of which would go to the specialist himself.—We are, Gentlemen, your obedient servants,

W. KNOWSLEY SIBLEY, M.D. Cantab., M.R.C.P. Lond.,
ERNEST A. SNAPE, M.D. Brux., L.R.C.P. Lond.

HISTORICAL NOTES ON MEDICINE, SURGERY, AND QUACKERY.

III.[1]

SOME time between 1780 and 1785 an extraordinary exhibition took place in a garden in the upper part of Fleet-street, Liverpool, when that street, though laid out, was not a thoroughfare. A person professing to be a medical practitioner, called Dr. Graham, arrived in the town and recommended the use of earth baths as a cure for various complaints. His plan was to have the patient buried up to the neck in earth, and in order to set the example he and a woman who was said to be his wife were buried up to their necks in the garden with their faces towards each other. They had their heads dressed with hair powder, as was the fashion at that period, and the public were admitted on payment of a small sum. There is not any reason, however, to believe that they induced any patient to follow their example.

The following advertisement appeared in Williamson's *Liverpool Advertiser* of Feb. 18th, 1757: "To prevent the Unwary from being drawn in by ignorant Pretenders to Midwifery in this town (as I have been lately), I think it my duty to acquaint the public that my late beloved wife, Mary Reily, was taken suddenly in labour on Saturday, the 5th instant, upon which the Surgeon we had formerly on the like occasion employed was sent for, but not then being at home, were under the Necessity of immediately applying to some other. Mr. John Wareing, a young Surgeon in Preeson's-row (unfortunately for me), was the person brought, who pretended to be acquainted with such like cases, & took upon him the remainder of the business of a Midwife (the child being born before his arrival); and tho' Contrary to the advice of an experienced Woman Midwife, who was called in, in the Hurry, & told him he was doing wrong, has occasioned (thro' ignorance) the Loss of my dear Wife and Child, who are since dead. This I am ready to attest upon oath, & can bring several experienced Persons to verify.—THOMAS REILY, Hatter, in Redcross-street." Something of the proverbial madness which clings to the calling of a hatter must have moved Mr. Reily in this affair. In the next number but one of the paper appeared a reply couched as follows: "Whereas an Advertisement was inserted in this paper of the 18th ult., signed by one Thomas Reily, a Hatter, in Redcross-street, addressed to the public, greatly aspersing the Character of Mr. John Wareing, a Surgeon, in Preeson's-row, in Liverpool, thereby charging him with being the instrument, thro' Ignorance, of the Death of said Reily's Wife and Child; which upon strict Enquiry is found to be altogether unjust and untrue; as it will be proved such Advertisement was inserted therein at the Instigation and by the Dictating of a Person in Town whose Character is too well known to want an Eclaircissement; and can assure the public that such Advertisement is utterly false and scandalous, and without the least Foundation, and was intended, thro' Malice, to injure the Character of Mr. Wareing, and no other Motive; as Mrs. Reily for many months before laboured under a Consumption; the Birth untimely, being but in the seventh [? month] of pregnancy, and the Child born before Mr. Wareing was sent for, and she was attended by another Surgeon (whose Prescriptions only she took) both before such Delivery and afterwards, till the Time of her Death, which was on the 10th Day after her Delivery, and not before; for which an Action at Law is, or soon will be, brought against the Writer and Composer of the same.—N.B The publisher of this Paper assures the Public that the Advertisement inserted in the *Manchester Advertiser* of last Tuesday, relative to the above affair, is entirely False, notwithstanding what is there asserted, and the same was refused on that Account to be inserted in our last Paper."

On July 29th, 1757, the following announcement (for which the printer received 12*s*., according to the file copy) appeared in the *Advertiser*: "To the Public: Whereas an Advertisement was inserted on Friday, the 18th of February, 1757, in this paper, Signed by me the underwritten Thomas Reily, a Hatter in Redcross-street in Liverpool, adressed (as therein is mentioned) to the public, *to prevent the Unwary from being drawn in by ignorant Pretenders to Midwifery*, whereby the Character and Reputation of Mr. John Wareing, Surgeon, in Preeson's-row, Liverpool, is greatly aspersed and injured by attributing the Death of my late Wife, Mary Reily, and the Child which she had then lately been delivered of, to the Ignorance of said Mr. Wareing in the Practice of Surgery and Midwifery; to which false and scandalous Aspersion, I, the said Thomas Reily, was irritated by Mr. Ralph Holt, of Liverpool, Surgeon, the person to whom Mr. Wareing faithfully served a legal apprenticeship; and for which Injury Mr. Wareing has had Recourse to the Law against me and Mr. Holt for Satisfaction, but upon a Meeting of Mr. Wareing, Mr. Holt, and myself (at the Request of Mr. Holt), I find that Mr. Wareing did faithfully perform his Duty to my said late Wife, and that such Aspersion and the whole of the said Advertisement is utterly false, and was intended to injure the Character Mr. Wareing, for which I am extremely sorry and sincerely ask his Pardon. And I the underwritten Ralph Holt, of Liverpool, Surgeon, do hereby declare that the said Mr. Wareing did faithfully perform his Duty as Man Midwife to Mrs. Reily, that the whole Contents of this Advertisement are strictly true, and that the said Advertisement of the 18th of Feby. last is without the least Foundation; that said Mr. Wareing faithfully served me a legal Apprenticeship in the Practice of Surgery and Midwifery, and after that studied the same and was regularly educated therein at one of the best Schools in Great Britain, and that I believe the said Mr. Wareing to be in every Respect duly qualified in these Professions; and am sorry that I was in any wise the Occasion of so false and scandalous an Aspersion, as I was misinformed relating to the subject matter of the said Advertisement, for which I have not only payed all Cost & Charges incurr'd by the said Prosecution commenced against me & the said Thomas Reily, but have asked Pardon of the said Mr Wareing in Public. Witness our Hands the 27th of July, 1757.—THOMAS REILY, Hatter; RA HOLT, Surgeon." Even at this distance of time one cannot but rejoice at the failure of this dastardly attempt to ruin the young surgeon on the very threshold of his career.

In consequence of the ravages of the small-pox it was resolved, in the month of March, 1783, that a general inoculation of the inhabitants of Liverpool should take place. The following medical men were formed into an Inoculation Society for that purpose: Dr. Houlston, Dr. Brandreth, Dr. Binns, Dr. Worthington, Dr Camplin, Dr. Currie, Dr Lyon, Mr. Alanson, Mr. Blundell, Mr. Buddicumb, Mr. R. Gerard, Mr. J. Gerard, Mr. Goldie, Mr. Hughes, Mr. Moss, Mr. Parke, Mr. Renwick, Mr. Shortcliffe, and Mr. Tetlow.

Dr Currie, the biographer of Burns, was born on May 31st, 1756, at Kirkpatrick Fleming, near Gretna, his father being the parish minister. He settled in Liverpool as a physician in 1780, and filled for twenty-five years a most honourable position. Dr. Currie published, under the pseudonym of "Jasper Wilson," a letter to Mr. Pitt strongly condemnatory of the war with France, which caused an extraordinary sensation. Three large editions were sold in two months, besides reprints in Scotland, Ireland, and in the country. It was reprinted in America and translated into French and German. Dr. Currie died on Aug. 31st, 1805. His life was published by his son, William Wallace Currie, the first Mayor of Liverpool under the Reform Act. Dr. Currie was a staunch opponent of the slave trade. In 1788 he wrote: "The general discussion of the slavery of the

[1] Nos. I. and II. were published in THE LANCET of March 6th and March 27th, 1897, respectively.

negroes has produced much unhappiness in Liverpool. Men are awaking to their situation, and the struggle between interest and humanity has made great havoc in the happiness of many families. If I were to attempt to tell you the history of my own transactions in this business, I should consume more time than I can spare. Altogether I have felt myself more interested and less happy than is suited to my other avocations. The attempts that are continually made to justify this gross violation of the principles of justice one cannot help repelling; and at the same time it is dreadful to hold an argument where if your opponent is convinced he must be made miserable. A little scoundrel—a Spanish Jesuit—has advanced to the assistance of the slave merchants, and has published a vindication of this traffic from the Old Testament. His work is extolled as a prodigy by these Judges of Compositions and is, in truth, no bad specimen of his talents, though egregiously false and sophistical, as all justifications of slavery must be. I have prompted a clergyman—a friend of mine—to answer him by telling him that if such be religion I would 'none on 't.' Whatever be the issue of the present efforts for the Parliamentary abolition of the slave trade, much good, I am persuaded, will be done by the discussion of the subject. We shall in future find fewer persons so abandoned in their modes of reasoning and practice towards the unhappy negroes as many now are, for there is something in the censure of man which the greatest villain dreads and does much to avoid. It likewise gives one a better opinion of the present generation to find that they can be roused by the pure dictates of humanity, independent of all party questions or distinctions, and there can be no doubt that sooner or later the voice of freedom and truth will exert itself on this subject with irresistible influence. Priestley, who spent an evening with me lately, is of opinion that no effort, even of the humblest individual, is ever lost. Let there be but agitation of any question and the interests of truth and virtue are promoted; no matter in what direction the motion comes, let there *be* motion—that is enough; the tide-mill goes equally whether the water runs with the flood or the ebb. This is a great man, and a most agreeable one." By writing in defence of the negro and in reprobation of the slave trade Dr. Currie, then rising into notice in Liverpool as a physician, had the courage to risk popularity and practice. To his own imperishable honour and to the honour of the great profession to which he belonged, his name stands in the page of history as one of the few men "who first raised the standard of justice and truth in Liverpool against a profitable traffic which had been sanctioned for centuries by the practice of every European nation, which had been recognised in numerous national treaties, and which did not want defenders even among t the ministers of religion themselves." Dr. Currie raised his voice against the pernicious practice which had been introduced in the new streets on the south side of the town of building houses to be let to labourers in small confined courts which had a communication with the street by a narrow aperture, but no passage for air through them. The consequences of overcrowding, filth, want of light, &c., were already frightful in the town. Fever naturally took up its abode among the dark dens where the ashpits sent their liquid filth oozing through the walls and their pestiferous gases flowing into the windows of the densely packed houses. In 1788 the physicians of the town brought this fearful state of things under the notice of the Mayor and magistrates, and in 1802 the corporation applied to Parliament for an Improvement Bill, wisely seeking in framing it information and suggestions from the medical officers of the infirmary and dispensary. An interesting report, containing enlightened views on sanitary matters, was drawn up by Dr. Currie and his coadjutors, and on this the sanitary clauses of the Bill were based. But the interests of different individuals being affected by the Bill, the old cry of rights of property was, as usual, raised in defence of the wrongs of property, and inferior consideration triumphed over the public good. The attempt to remove the causes of the evil failed; but at a cost of 9*d.* in the pound, which if properly expended would have gone far to remedy the mischief, a fever hospital was erected to mitigate the scourge, and a new cemetery was bought to hide its victims. These facts were stated by Mr. James Newlands, F.R.S.S.A., Borough Engineer of Liverpool, before a meeting of the National Association for the Promotion of Social Science, Department of Public Health, held at St. George's Hall on Oct. 15th, 1858. "I beg to claim your attention to the Report that these gentlemen made," said Mr. Newlands, referring to the report of Dr. Currie and his professional brethren; "the clear perception of sanitary principles which they possessed and unfolded in this document would do honour to any man in the present day."

In January, 1847, Dr. Duncan was appointed medical officer of health for Liverpool, an office in which he rendered the greatest services to the health of the town. At the time of this appointment Mr. Edwin Chadwick, the Registrar-General, made the following remarks on the necessity of a liberal expenditure for sanitary purposes in a place at once so rich and so unhealthy as Liverpool then was: "A parsimony," he said, "for objects of such importance as the saving of pain and misery would ill become Liverpool, where there is in course of expenditure for splendour on one single edifice, St. George's Hall, upwards of £100,000—a sum which would, if so applied, serve to sweep and cleanse in perpetuity and make decent the filthy by-streets of upwards of 23,000 houses out of the 45,000 houses which are under the corporation jurisdiction. And allow me to pause by the way," he added, "to offer the suggestion for consideration, since that edifice is to be adorned with statues, whether a place may not be found for one, amongst other men who have adorned Liverpool, to the late Dr. Currie, who, with the physicians of the fever hospital, in the year 1802, pointed out preventive measures which if they had been adopted would have prevented Liverpool being now the least healthy city in Great Britain, and would have averted the heavy mortality burdens by which its population is now depressed." Commenting on this Mr. Thomas Baines, in his History of Liverpool, remarks: "The suggestion of ornamenting St. George's Hall with a statue of a man whose memory is so justly dear to the friends of literature, freedom, and benevolence as that of Dr. Currie must ever be is worthy of adoption; but it must be added, in justice to Liverpool, that whilst nearly £200,000 has been expended in adorning the town with one of the noblest buildings of modern times, two, if not three, times that sum has been spent, or is spending, on improvements designed to promote the public health by means of sewage and cleansing, of baths and washhouses, of improvements in the residences of the poorer classes, and of an abundant supply of water, brought from a distance of many miles. It is doubtful whether a town like Liverpool, which can be reached at a trifling expense by the most destitute of the Irish poor, will ever be as healthy as towns less accessible to that poverty-stricken people; but it would be a great injustice to suppose that the people of Liverpool are erecting magnificent buildings and leaving the poor to perish. Nothing can be further from the truth." Mr. Baines was writing of a period when all Ireland was suffering under the plague of famine, when the influx of the destitute into Liverpool was so overwhelming that not less than 29,417 persons received parish relief, as casual poor, in six days, in addition to the resident poor. The actual number of Irish poor who arrived in the town from Jan. 16th to April 17th in 1847 was 127,785 persons—namely, 69,695 men, 36 234 women, and 22,686 children.

"Liverpool a Few Years Since," by "An Old Stager" (the late Rev. James Aspinall, M.A., Rector of Althorpe), a book published in 1852, mentions several medical men of note. "Dr. Currie, so celebrated in his day and so celebrated yet, lived in Basnett-street. Bold-street had its Tobins, Aspinalls, Dawsons, &c. That kind-hearted man, Rector Renshaw, lived here in a corner house, with its door opening up Newington Bridge. ..... Opposite to the house of Rector Renshaw was that of Harry Park, as we familiarly called him, the Abernethy or Astley Cooper of Liverpool, as a surgeon, we believe, second to no man of his day. At the very next door lived Dr. Brandreth, of whose eminence, or pre-eminence, as a physician it is impossible to speak too highly. In all our wanderings over and sojournings in different parts of the world we never remember to have met with a medical man whose standing was so thoroughly ascertained, admitted, and appreciated. And his position was as elevated in the social as in the medical world. There was no appeal against the fiats which Fashion issued from her seat in Bold-street. ..... In Seel-street was Mr. Perry, the first dentist of his day and locality; and next door to him lived the tremendous Mrs. Oates, the best instructress of small children in the rudiments of English whom the world has ever seen. She had a knack of measuring baby capacity and of drawing out all that it contained, helped thereto doubtless by a concentrated essence of birch-rod look which she constantly wore in school hours,

and which had "no mistake" written upon it in large letters."

Besides the illustrious Roscoe, who in 1789 was elected President of the Liverpool Library, there were associated with him as active members of the committee, amongst others, Dr. Currie, Dr. Bostock, Dr. Rutter, and Dr. Worthington. Of Dr. Currie we have already spoken. John Bostock, M.D., was the author of an "Essay on Respiration," 8vo, Liverpool, 1804; "Remarks on the Nomenclature of the New London Pharmacopœia," read before the Liverpool Medical Society, 1810; "Elements and System of Physiology," 8vo, 1824; and numerous communications to the *Medical Memoirs* and *Nicholson's Journal*.

Dr. Rutter, a celebrated physician of his day, resided in St. Anne-street, then the fashionable quarter of the town. He was of the Society of Friends, like Dr. Jonathan Binns. Dr. Rutter was the founder of the Medical Institution and Library in Hope-street, the books of which were bequeathed by him to the profession. The Liverpool Athenæum Newsroom was also established by Dr. Rutter in the year 1798, associated with him being Mr. Joshua Lace, Mr. Roscoe, and Mr. Currie. The idea of the Athenæum arose from the annoyances that gentlemen had to encounter at the "Merchants' Coffee House" in the Old Churchyard, and at "Pontack's" in Water-street, through the boisterous conduct of the sea captains who frequented those taverns. The newsroom stands on the site of a large pond whereon the lads used to slide in winter. In 1788 the dispensary was erected on the site of an orchard adjoining the pond. This charity owed its existence to Mr. Wyke, a watchmaker in Dale-street, who in 1778 started it at No. 75, Prince's-street, John-street. On the sale of the property in Church-street in 1829 for £6000 the dispensary was removed to Vauxhall-road. Towards its original foundation the subscriptions of 102 subscribers, amounting to £117 12*s*., were supplemented by 100 guineas contributed by the parish. According to the report of the dispensary published at the beginning of the year 1786 it appeared that 66,359 persons had been relieved up to that time. The subscription list and the list of the medical officers of this charity for the first year of its institution gives us practically a register of the leading members of the profession at that time practising in Liverpool. Its physicians were Dr. Joseph Brandreth, Dr. Jonathan Binns, and Dr. James Worthington; its surgeons were Mr. Wright Gleave, Mr. Edward Alanson, and Mr. James Gerard. These gentlemen subscribed a guinea each, as also did Dr. W. F. Blencome, Dr. Joseph Camplin, Dr. Matthew Dobson, Dr. Thomas Houlston, Dr. John Kenion, Dr. Wainwright, Dr. Henry Richmond, and the following surgeons: Robert Buddicombe, Henry Parke, John Lyon, Richard Gerard, William Moss; and James Leigh, apothecary. Among the non-professional subscribers were the illustrious Roscoe and Benedict Paul Wagner, merchant, the latter being the maternal grandfather of Felicia Dorothea Hemans. The rent of the institution for one year is put down at £3, and the salary of Mr. Avison, the apothecary, at £60.

Appended are a few facts concerning the above-named physicians and surgeons, taking them at random. Dr. James Worthington resided in Drury-lane, off Water-street, where also lived the wealthy merchant and ex-slave captain William Boates, who on being told that one of his ships had captured a rich prize ran about the pier-head exclaiming, "Billy Boates, once a beggar, now a lord." Billy had been a waif found in a boat. Dr. Worthington published a treatise on the "Mineral Spring in the Quarries near St. James's Mount." Mr. William Moss, surgeon to the Liverpool Lying-in Charity, published "An Essay on the Management, Nursing, and Diseases of Children," 1794; also a "Medical Survey of Liverpool," 1794. Jonathan Binns, M.D., was for many years senior physician to the Liverpool Dispensary. He published at Edinburgh, in 1762, "Dissertatio Medica in Auguralis de Exercitatione." He superintended for some time the school belonging to the Society of Friends in Yorkshire, and whilst there published an English Grammar and also a Vocabulary. He removed to Lancaster, where he practised as a physician until the time of his death in 1812, aged sixty-five years. Dr. Binns had the courage to oppose the slave trade when it was bringing a profit of from £200,000 to £300,000 a year into the port of Liverpool. The only two Liverpool members whose names appear in the list of the original members of the Society for the Suppression of the Slave Trade were Dr. Jonathan Binns and William Rathbone. Liverpool has never lacked a William Rathbone since to help in all good work, and it was the lot of Sir Joseph (now Lord) Lister, on Sept. 20th, to pay a graceful tribute to the munificence of the present William Rathbone in connexion with the efficient nursing of pauper patients in the Workhouse Infirmary.

Mr. Richard Gerard, surgeon, Mayor of Liverpool in 1780, resided at one time in Church-street, and at another period in Duke-street. He was the father of Dr. Gerard, and an especial pet with the ladies in St. Anne-street because he accepted all their invitations to their routs, which must have been a trying ordeal. Dr. Gerard's famous recipe for making toffee has rendered Everton as well known in connexion with it as Shrewsbury by its cakes, Bologna by its sausages, Strasburg by its pies, Chelsea by its buns, and Islay by its whisky. The original possessor of Dr. Gerard's recipe was one Mistress Molly Bushell, who resided in one of the old cottages (about midway up "the town" of Everton) which were said to have been the quarters of the Royalist officers when fiery Rupert besieged Liverpool. Toffee was recommended at first as a specific for coughs, colds, and catarrhs, and it so speedily became known and patronised by the sweet-consuming world that it tended greatly to Molly's mental content and worldly prosperity.

Matthew Dobson, M.D., F.R.S., was the son of the Rev. Joshua Dobson, "a respectable Dissenting minister" in Yorkshire, and was originally designed for the ministry. His inclinations, however, led him to the study of medicine and he took his degree at Edinburgh. He afterwards settled at Liverpool, and acquired very considerable practice; but bad health induced him to remove to Bath, where he died in the year 1784, and was buried at Walcot Church. At the time of his death he was preparing materials for the natural and medical history of the town of Liverpool. In Enfield's History are two essays by him: Observations on the Temperature of the Air, and on the Variations in the Temperature of the Sea. He also published the following: "A Medical Commentary on Fixed Air," London, 1779; "Experiments and Observations on the Diabetes"; "A Successful Treatment of a Supposed Hydrophobous Internus" ("Medical Observations and Inquiries," vol. vi., p. 48); "On the Benefit of a Resuscitated Salivation in the Cure of Several Anomalous Symptoms" (Ibid., p. 174); "A Description of a Petrified Stratum formed from the Waters of Matlock in Derbyshire" (Philosophical Transactions, Abstract, 13, p. 510, 1774); "Experiments in a Heated Room in the Hospital at Liverpool" (Ibid., p. 687, 1775); Observations on the Annual Evaporation at Liverpool (Ibid., 14, p. 137, 1777); and "An Account of the Harmuttan, a Singular African Wind" (Ibid., 15, p. 23, 1781). Dr. Dobson was succeeded in his practice by Dr. Brandreth from Ormskirk. Whilst resident in Liverpool he lost a daughter, to whose memory a monument, with an affectionate Latin inscription, is placed in the chapel near the Dingle. Mrs. Susannah Dobson, formerly Miss Dawson of the South of England, the wife of Dr. Dobson, was renowned in her day as the author of the "Life of Petrarch," abridged from the French, 2 vols, 8vo, London, 1775; "The Literary History of the Troubadours," collected and abridged from the French of De St. Pelaie, London, 1779; "Memoirs of Ancient Chivalry," London; "Petrarch's View of Human Life," 1791; and "A Dialogue on Friendship and Society" (anonymous). She died in London in 1795, and was buried at St. Paul's, Covent-garden. William Lowndes, grandson of Dr. Dobson, was the author of a "Treatise on the Law of Legacies."

Mr. Edward Alanson was the author of "Observations on Amputation," 8vo, 1779; second edition, 1782; "An Account of Simple Fracture of the Tibia" (Medical Observations, vol. iv.). Dr. Houlston was a physician of some note in his day. He discovered in 1773 a ferruginous spring of water in the great quarry, which he dignified by the title of the "Liverpool Spa." The great quarry is now St. James's Cemetery, which is overlooked by Hope-street. This spot in Dr. Houlston's time was covered with the wild heather and furze, while the spring now flowing in the cemetery is not that about which Dr. Houlston wrote, although it has been credited with the same properties, tending to the cure of rheumatic complaints. Dr. Houlston had a house in Chapel-street, probably at the junction of that street with High-street, as, according to one authority, he resided in the latter thoroughfare, which then extended to Chapel-street. To-day the Liverpool Town Hall flanks one side of all that remains of High-street, and the merchants of Liverpool on 'Change make and lose fortunes

on the spot where the old-world physician wrote his prescriptions and healed the men and women whose thoughts were engrossed by the prices of slaves and sugars. Dr. Houlston took a great interest in the public institutions of the town, and he was the originator of the Humane Society. An essay entitled "Plain Directions for the Recovery of Drowned Persons," signed by "Humanus," written, there is reason to believe, by Dr. Houlston, appeared in the *Liverpool Journal*, Sept. 24th, 1773, but no proceedings were then taken to form a society. The Humane Society in London was instituted in 1774 at the suggestion of Mr. Hawes and Dr. Cogan. The latter had, in 1773, translated a Dutch memoir on the subject, and in 1775 a house of reception was opened in Liverpool, on the north side of the old dock (the site of the Custom House), and an institution established at the instance of Dr. Houlston on a similar plan to that in the metropolis, which was maintained with vigour for some years, but was afterwards suffered to fall to decay. A new society, entitled the Marine Humane Society, was established in 1823. Dr. Houlston published the following: "An Essay on the Liverpool Spa Water," 1775; "Observations on Poisons and the Use of Mercury," 1784; "Observations on Mineral Poisons, with Cases" (Med. Comm.); "Observations on Canine Madness" (Ibid.), and "Remarks on the Hydrophobia and on the Ormskirk Medicine," 1786.

Dr. Bromfield, probably the alderman already mentioned, was interested in the salt water bath "at the Bath Hall and Coffee House," a description of which appeared in *Williamson's Advertiser* of June 13th, 1756; the advertisement, at any rate, was debited to Dr. Bromfield, according to the file copy of the paper, now extremely rare.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the last meeting of the Council the following document was signed by all the members of the Council present, but we were unable to publish it in our report of the meeting as it formed part of a Parliamentary paper which had not then been presented to Parliament.

"We, the Council of the Royal College of Surgeons of England, desire to impress upon Her Majesty's Government the urgent need for the adoption of measures to check the prevalence of venereal disease in the Indian Army.

"The extent to which the British troops in India are shown by official reports to be now infected with venereal disease not merely seriously impairs the efficiency of the Army in that country, but constitutes, we believe, a grave danger to the health of the nation at home.

"When we know that 15,000 soldiers, of whom only 4 per cent. are married, leave India every year, and that at least one quarter of them have been affected with constitutional syphilis during their service in India, we can realise the risks to which the civil population in this country are exposed when these men return home.

"It has been shown that in 1894 only 37 per cent. of the British troops in India had never suffered from any form of venereal disease, that 28 per cent. had been treated for syphilis; and that of late years there has been a rapid increase in the frequency of both the primary and secondary forms of syphilis, and also, in a marked degree, in the virulence of the disease. In face of such facts, it is difficult to overestimate the amount of suffering which must follow, not only in the near future, but in years to come.

"We therefore express our earnest hope that Her Majesty's Government may take effective means to check the ravages of a disease which not only undermines the constitution of those who contract it in the first instance, but, by reason of the many ways in which it may be transmitted, destroys the health and happiness of countless other persons, and induces in the children of those originally infected diseases of a most formidable character."

THE PLAGUE IN BOMBAY.

THE total number of cases of plague in Bombay since the outbreak of the epidemic is returned as 10,583, of which 8976 proved fatal. The mortality from all causes during the last week reported amounted to 1149, against 1139 in the preceding week.

The Secretary of State for India has received the usual weekly telegram from the Governor of Bombay, from which we extract the following:—"Deaths from all causes in Bombay city for the week ended April 2nd, 1069; reported plague deaths, 481. During the past week one European plague case in Bombay city, one death in Mofussil. At Karachi during the week ended April 2nd, 189 plague deaths; marked decrease in Trans-Lyari, but marked increase in Keamari and one quarter of town, and a few cases in and about cantonment limits. At Sukkur plague is established; 103 cases, 58 deaths during week; Plague Committee formed; special civil and military officers sent, and thirty English soldiers being sent. At Haidarabad practically no change."

We may add that the death rate at Poona is decreasing, and that recoveries are becoming much more frequent than they were. House-to-house visitations in plague-infected districts, inspections, and preventive measures generally are being energetically carried out.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of this society was held on April 6th, at which the following resolutions were carried unanimously:—

"That the Association of Fellows and the 201 Fellows who voted in favour of extending the franchise to the Members be cordially thanked for their liberal-minded action, and this committee is confident that their example will be followed by the majority of Fellows on the next occasion."

"That a letter be written to the Association of Fellows stating that in the opinion of this committee it would be greatly to the interest of the College if steps were at once taken to invite Lord Lister to allow himself to be nominated as a candidate at the next Council election with a view to his becoming President of the College in July next."

"That the committee of this society observes with pleasure that the Council proposes to celebrate the Diamond Jubilee of Her Majesty in some fitting manner, and the committee trusts that this may take a form in which the Members generally may be able to participate."

"That the best thanks of this society be offered to Mr. Walter Rivington for his consistent advocacy for many years of the Members' claim to representation, and for the manner in which he has sacrificed his collegiate interests to promote the true welfare of the institution and of all connected with it."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6475 births and 3866 deaths were registered during the week ending April 3rd. The annual rate of mortality in these towns, which had been 18·7 per 1000 in each of the two preceding weeks, declined again last week to 18·3. In London the rate was 17·6 per 1000, while it averaged 18·9 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·6 in West Ham, 12·9 in Croydon, 13·1 in Derby, and 13·4 in Gateshead; the highest rates were 24·0 in Nottingham, 26·4 in Salford, 27·0 in Burnley, and 34·8 in Bolton. The 3866 deaths included 344 which were referred to the principal zymotic diseases, against 344 and 359 in the two preceding weeks; of these, 105 resulted from whooping-cough, 89 from measles, 66 from diphtheria, 28 from scarlet fever, 23 from "fever," (principally enteric), and 23 from diarrhœa. No death from any of these diseases was recorded last week in Swansea, in Birkenhead, or in Wolverhampton; in the other towns they caused the lowest death-rates in Norwich, Huddersfield, and Halifax, and the highest rates in Leicester, Manchester, Salford, and Bolton. The greatest mortality from measles occurred in Newcastle-upon-Tyne, Burnley, Plymouth, Salford, and Bolton; from whooping-cough in Bristol, Leicester, and Manchester; and from "fever" in Derby. The mortality from scarlet fever showed no marked excess in any of the large towns. The 66 deaths from diphtheria included 41 in London and 3 in Salford. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There were 17 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 3rd inst., against 30, 29, and 21 at the end of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 2512, against 2685, 2622, and 2585 on the three preceding Saturdays;

219 new cases were admitted during the week, against 218, 206, and 224 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 317 and 313 in the two preceding weeks, further declined last week to 282, and were 145 below the corrected average. The causes of 52, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Leeds, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Salford, Preston, Huddersfield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·3 and 22·6 per 1000 in the two preceding weeks, further declined to 22·1 during the week ending April 3rd, but was 3·8 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·4 in Paisley and 17·0 in Perth to 22·9 in Edinburgh and 24·1 in Glasgow. The 659 deaths in these towns included 41 which were referred to whooping-cough, 29 to measles, 17 to diarrhœa, 9 to diphtheria, 6 to "fever" (principally enteric), and 2 to scarlet fever. In all, 104 deaths resulted from these principal zymotic diseases, against 106 and 96 in the two preceding weeks. These 104 deaths were equal to an annual rate of 3·5 per 1000, which exceeded by 1·9 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 33 in each of the two preceding weeks, rose again to 41 last week, and included 28 in Glasgow and 9 in Edinburgh. The deaths referred to measles, which had increased from 27 to 36 in the three preceding weeks, declined again to 29 last week, of which 15 occurred in Glasgow and 12 in Edinburgh. The 9 fatal cases of diphtheria considerably exceeded the number recorded in any recent week, and included 6 in Glasgow and 3 in Edinburgh. The deaths referred to different forms of "fever," which had been 11 and 4 in the two preceding weeks, rose again to 6 last week, of which 5 occurred in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 155 and 159 in the two preceding weeks, declined to 146 last week, but exceeded by 39 the number recorded in the corresponding period of last year. The causes of 45, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 40·4 and 36·1 per 1000 in the two preceding weeks, rose again to 38·5 during the week ending April 3rd. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 40·2 per 1000, the rate during the same period being 18·4 in London and 22·4 in Edinburgh. The 258 deaths registered in Dublin during the week under notice showed an increase of 16 upon the number in the preceding week, and included 47 which were referred to the principal zymotic diseases, against 74 and 67 in the two preceding weeks; of these, 27 resulted from measles, 9 from whooping-cough, 4 from scarlet fever, 4 from diarrhœa, 2 from "fever," and 1 from diphtheria. These 47 deaths were equal to an annual rate of 7·0 per 1000, the zymotic death-rate during the same period being 1·6 in London and 5·0 in Edinburgh. The fatal cases of measles, which had been 46 and 37 in the two preceding weeks, further declined to 27 last week. The deaths referred to whooping-cough, which had been 20 and 19 in the two preceding weeks, further fell to 9 last week. The 4 fatal cases of scarlet fever exceeded the number recorded in any recent week. The 258 deaths registered in Dublin last week included 48 of infants under one year of age and 47 of persons aged upwards of sixty years; the deaths of infants showed a slight decline; while those of elderly persons exceeded the number recorded in the preceding week. Five inquest cases and 3 deaths from violence were registered; and 76, or nearly a third, of the deaths occurred in public institutions. The causes of 17, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR W. F. HEFFERNAN is attached to the Station Hospital, Poona, for duty. Surgeon-Captain C. G. Spencer has been posted to India, and Surgeon-Captain S. Powell to Aldershot.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the undermentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty: Surgeon-Captain C. T. Hudson (Bombay), Surgeon-Captain C. H. Bedford (Bengal), Surgeon-Captain C. Milne (Bengal), Surgeon-Captain E. A. Newman (Bengal), Surgeon-Lieutenant B. H. F. Leumann (Bombay), Surgeon-Lieutenant H. J. K. Bamfield (Bengal), Surgeon-Lieutenant V. B. Bennett (Bombay), Surgeon-Lieutenant S. Evans (Bombay), Surgeon-Lieutenant A. Hooton (Bombay), Surgeon-Lieutenant A. W. R. Cochrane (Bengal), Surgeon-Lieutenant N. R. J. Rainier (Bengal), Surgeon-Lieutenant W. J. Niblock (Madras), Surgeon-Lieutenant H. J. Walton (Bengal), Surgeon-Lieutenant A. E. H. Pinch (Bengal), Surgeon-Lieutenant J. W. Cornwall (Madras), and Surgeon-Lieutenant W. G. Richards (Madras). The services of the undermentioned officers are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on plague and famine duty:—Surgeon-Captain A. W. Dawson (Bengal), Surgeon-Captain B. R. Chatterton (Bengal), Surgeon-Captain J. Mulvany (Bengal), Surgeon-Lieutenant C. H. Bensley (Bengal), Surgeon-Lieutenant J. C. Robertson (Bengal), Surgeon-Lieutenant C. D. Dawes (Bengal), Surgeon-Lieutenant C. B. Harrison (Madras), Surgeon-Lieutenant J. S. Stevenson (Bengal), Surgeon-Lieutenant A. Miller (Madras), and Surgeon-Lieutenant H. R. Brown (Madras). The services of Surgeon-Captain J. J. Bourke (Bengal) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces for employment on plague duty. The services of the undermentioned officers are placed temporarily at the disposal of the Foreign Department for employment on plague duty: Surgeon-Major Jamshedji Kharshedji Kanga (Madras), and Surgeon-Lieutenant J. Stephenson (Bengal).

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Fleet-Surgeons: Theodore J. Preston to the Royal Victoria Yard, Deptford, and Richard S. P. Griffiths to Haulbowline Hospital. Surgeon Benjamin G. Heather to the *Virid*.

VOLUNTEER CORPS.

Royal Engineers: 1st Lancashire: Surgeon-Lieutenant J. M. Whiteford resigns his commission. *Submarine Miners:* The Clyde Division: John Rowan, M.B., to be Surgeon-Lieutenant. The Tees Division: Surgeon-Captain W. J. Williams M.D., resigns his commission. *Rifle:* 3rd Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant-Colonel G. Okell resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 3rd Volunteer Battalion the King's (Liverpool Regiment): Thomas Hammond Fisher, gent., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment) Surgeon-Lieutenant S. Lodge, M.D., to be Surgeon-Captain. 3rd Volunteer Battalion the Cheshire Regiment: Lieutenant Charles Adolphe Knowles Renshaw resigns his commission, and is appointed Surgeon-Lieutenant; Edward John Sidebotham, M.B., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Northamptonshire Regiment: Herman Stedman, M.D., to be Surgeon-Lieutenant. 9th Middlesex: Charles Ernest Goddard, gent., to be Surgeon-Lieutenant. 3rd Volunteer Battalion (the Manchester Regiment): Surgeon-Captain J. Duncan, M.B., to be Surgeon-Major. 1st Sutherland (the Sutherland Highland): Surgeon-Lieutenant J. B. Simpson to be Surgeon-Captain. 6th Volunteer Battalion the Gordon Highlanders: Alfred Bell Whitton, M.B., to be Surgeon-Lieutenant.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain J. Duncan, M.B., to be Surgeon-Major. Surgeon-Lieutenant Hugh Dickie, M.B., 1st Volunteer Battalion the Northumberland Fusiliers to be Surgeon-Captain. Surgeon-Lieutenant William Pemberton Peake,

1st Volunteer Battalion the Leicestershire Regiment, to be Surgeon-Lieutenant.

THE HEALTH OF THE TROOPS IN INDIA.

The *Times* of the 1st inst. publishes an analysis of the memorandum which has just been issued by the British Committee of the Federation for the Abolition of the State Regulation of Vice, signed by the chairman, Mr. Walter S. B. Maclaren, and accompanied by a "brief statement as to the nature and tendency of the Contagious Diseases Acts and why their re-introduction should be resolutely opposed." The committee recognise the seriousness and difficulty of the situation, and although they declare a return to the old regulation system to be impossible, not only because it encouraged vice, but because it failed in its object, they are not in favour of a do-nothing policy. What, in their opinion, must be done is to attempt honestly to diminish the vice which is the cause of the disease. To this end moral character should be made an important element in promotion; a man's "medical history sheet" should be taken as an indication of character in the same way as the "defaulters' sheet," and regiments in a specially bad condition should be treated with special discipline. Further, a Select Committee should consider how the moral tone of the Army can be raised amongst both officers and men; how further occupation and recreation can be provided; why the percentage of married soldiers is so much smaller than it used to be; whether a longer service system for older men is feasible or desirable; why the numbers of cantonment hospitals and cantonment general hospitals have so greatly decreased; how the contraction of disease may be made more difficult; and why the admissions to hospital vary so much in different stations and different regiments. The committee point out that anything on the lines of the Act for the Notification of Diseases and the detention or imprisonment of persons in hospitals would lead to improper denouncing in certain cases and blackmail. They object to any scheme which necessitates the examination of women, and are prepared to resist to the uttermost such a system as that of the Cantonments Regulations.

GUN-SHOT WOUNDS DURING THE MADAGASCAR EXPEDITION.

That the late Madagascar war cost the French dear is unfortunately well known, but not many of the casualties were due to the weapons of the enemy. According to a return which has just been published by order of the War Minister 46 men belonging to the flying column were treated for gun-shot injuries in the ambulance which was established at Isoavinandriana in the building formerly occupied by the English hospital. The strength of the column which left Andriba on Sept. 14th, 1895, was 237 officers and 4013 men, with 1515 non-combatant followers. It was not until the 26th that the first batch of wounded, consisting of 6 men, reached the ambulance. On the 28th 5 arrived, and the next day 5 more. The final consignment, 30 strong, was received on the 30th; 44 men out of the 46 were wounded by soft lead bullets fired from breech-loading rifles of a large calibre. Two men only were struck by small bore projectiles of the Winchester pattern. The shells that were discharged by the Hova artillery were badly aimed and seldom or never burst; no one was injured by them. Five deaths took place among the wounded, a result which, considering the bad health of the troops and the hardships and privations they were exposed to, must be regarded as highly creditable to the medical officers of the ambulance. Only one amputation was performed, the 40 remaining cases recovering without the loss of a limb.

THE "ALEXANDER MEMORIAL FUND" PRIZE.

The prize of £50 and the gold medal for the "Alexander Memorial Fund" for 1896 has been awarded to Surgeon-Major Cecil Birt, Army Medical Staff. The subject for the next competition is "Injuries to Joints and Long Bones caused by Modern Small Arm Projectiles; their Nature, Diagnosis, and Treatment, with special Reference to the Appliances Required and Available on Field Service." Essays must reach the President of the committee on or before December 31st, 1899. Essays are to be legibly written, superscribed with a brief motto, and accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. No essay shall exceed in length fifty pages of ordinary printed octavo, which may be estimated as amounting to 20,000 words. This limit is exclusive of tables, which may be added in the form of appendices. The competition is limited to executive officers of the Army Medical Staff on full pay; but professors and assistant professors at Netley are not allowed to compete while so employed.

THE HEALTH OF THE TROOPS.

A Parliamentary paper has been issued showing the average annual strength of the troops at certain home and foreign stations in the years 1894 and 1895, with the admissions of soldiers to hospital and the ratio of admissions per 1000 of mean strength for all forms of venereal disease and the ratio constantly sick from such causes per 1000 of mean strength. From this return it appears that the ratio of admissions to hospital and of men constantly sick from all forms of venereal disease shows a decrease in the named years in the United Kingdom, in the West Indies (including Jamaica), and in Egypt; but an increase in Gibraltar, Malta, Canada, Bermuda, South Africa and St. Helena, China and the Straits Settlements, and in India; while as regards Cyprus the ratio of admissions has increased, but of men constantly sick has decreased, and as regards Mauritius and Ceylon the opposite has taken place.

Correspondence.

"Audi alteram partem."

RIGHT-HANDEDNESS.

To the Editors of THE LANCET.

SIRS,—In his Lumleian Lectures on Aphasia Dr. Bastian makes allusion to right-handedness and its probable influence on the localisation of the speech faculty in the left cerebral hemisphere, and he says, in effect, that none of the answers hitherto given to the question, "Why are we right-handed?" are altogether satisfactory. All are agreed that the causes of right-handedness are to be looked for in our remote ancestors, and an appeal is made to education and heredity as offering sufficient explanation. I believe that right-handedness is a necessity and depends upon the distribution of the weight of the viscera in the thorax, and that our four-limbed ancestors were right-pawed long before they began to stand on their hind-legs for oratorical or other purposes. The weight of the viscera in the left half of the thorax is considerably greater than that of those in the right half. This is evident in the dead body; but the contrast during life, when the heart is full of blood and the right lung is thoroughly inflated, must be far greater than it is after death.

When an animal stands upon its four limbs, the body being horizontal, it is evident that the centre of gravity of the thoracic cavity is nearer the left fore-limb than the right fore-limb, and that the stability of the body is more upset by taking the left fore-limb off the ground than it is by removing the right fore-limb off the ground. If an animal, therefore, wishes to make independent use of one of its fore-limbs, it probably chooses the right for that purpose, because by so doing it interferes very little with the stability of the body, and it is evident that unless the body be firmly planted on the ground the independent use of one of the fore-limbs cannot be really effective. A little child left to itself and crawling on "all fours" would for the same reason use the right arm by preference for purposes which are independent of locomotion.

I am, Sirs, yours truly,

Wimpole-street, April 8th, 1897. G. V. POORE.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—As far as facts and figures are concerned, Mr Clement Lucas's two long and genial letters furnish no additional arguments in favour of his views. My reading of Mr. Lucas's original article led me to the conclusion that he wished to establish some connexion between the occurrence of pneumonia and the administration of the anæsthetic, and my argument is that there is no reliable evidence in favour of this view, but that when the matter is critically examined it is seen to rest on mere tradition. There can be no two

opinions as to the desirability of cleanly administration, but there is surely a far cry between this admission and the association in question. In matters bacteriological I see no shame in admitting that I am "a child," and for this reason I was careful not to give my own opinions, but, as the context showed, the opinions of leading authorities. Whether the opinions of Crookshank and Sternberg are accepted by modern physicians is a matter for the modern physicians themselves to determine; it is true, of course, that Crookshank's last edition is now a few months old, and many theories may have been advanced since then. The diatribe against the Clover's inhaler, quoted by Mr. Lucas, is, I fancy, not unknown even in this (anæsthetically) degenerate Western hemisphere, but it loses much of its force when we recollect that almost precisely similar invective may be directed against any surgical instrument or surgical procedure. Anyone who cares to take the trouble can clean, boil, or superheat a metal inhaler with ease, and, on the other hand, a surgical instrument in careless hands may become the very acme of all that is foul and filthy; the antiseptic process itself has been condemned because of failures consequent upon faulty technique.

I have the honour to remain, Sirs, your faithfully,

J. FREDK. W. SILK.

Devonshire-street, Portland-place, W., April 5th, 1897.

"AN UNDESCRIBED SYMPTOM."

To the Editors of THE LANCET.

SIRS,—In connexion with Mr. Battle's paper in THE LANCET of March 27th, "An Undescribed Symptom in Peritonitis," it may be of interest if I briefly describe a very similar case which I recorded in THE LANCET of May 10th, 1890, p. 1015, under the title of "An Unusual Case of Strangulated Hernia." A middle-aged man suffering from strangulated hernia was admitted into the General Hospital, Birmingham, under the care of Mr. Haslam, to whose courtesy I was indebted for permission to publish the case. The man's general condition was very much the same as that of Mr. Battle's patient. He was in a condition of collapse and could hardly answer questions, so it was difficult to get a history. His abdomen was distended, motionless, and tympanitic. Over the lower part of it was an œdematous swelling. The swelling occupied both groins, especially the right, and extended into the perineum as far as the base of the triangular ligament. The scrotum was swollen and tense. The swelling on the abdomen was limited towards the thighs by Poupart's ligament. The whole appearance was so like that produced by extravasation of urine that more than one surgeon who saw the case was inclined to make that diagnosis rather than the one of strangulated hernia, to which other symptoms pointed. The patient was placed under chloroform, and an incision over the right inguinal region showed a hernia of the small intestine. The gut was gangrenous and piebald in colour, though it had not given way. The sac was full of purulent fluid. The tissues over the sac were also infiltrated with fluid. The bladder and urethra were examined, but no extravasation of urine was found. They were quite healthy. The patient was now in a moribund condition, or the abdomen would have been opened and washed out. He died a few hours after. A post-mortem examination showed extensive suppurative peritonitis which had probably started in the hernial sac.[1] The condition of œdema was almost exactly like that which Mr. Battle describes. In both cases the symptoms appeared in a "late stage of the disease" and "indicated a very intense inflammation of the peritoneum." In future cases of the kind the bacteriology ought to be carefully worked out.

I am, Sirs, yours faithfully,

Hove, March 29th, 1897. D. R. P. STEPHENS, F.R.C.S. Eng.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—Any one knowing much of epileptics—whether suffering from immediate traumatic epilepsy or transmitted (?) or obscure epilepsy—must know that even the best of them are quite unfitted for responsibility. They may be skilled up to certain points in music, art, literature, or manual work; but they are always subject to fits of more or less irresponsibility, they are always uncertain and not to be relied upon, and thus are quite unfit to have the training or hold the destinies of others in their hands. Thanking you in anticipation for your courtesy in giving my letter room,

I am, Sirs, yours faithfully,

MABEL ANDERSON, Lady Superintendent.

Meath Home for Epileptics, Godalming, April 3rd, 1897.

THE PROPHYLACTIC VALUE OF QUININE IN MALARIA.

To the Editors of THE LANCET.

SIRS,—I am reported in THE LANCET of April 3rd as having drawn attention, in a note upon Central African malaria, read before the Liverpool Medical Institution, to the "prophylactic value of small daily doses of quinine sufficient to cause slight aural disturbance." In discussing the prophylactic measures adopted by me in Central Africa, I gave a certain amount of credit to the exhibition of small daily doses of quinine, commenced at sea before entering the country and continued whenever the line of march lay along the course of low-banked rivers or cut across marshes or alluvial plains at a watershed foot. The doses were quite small, about four grains per diem, and were never pushed to the causation of symptoms.

The physiological index is of great value in the treatment of actual febrile manifestations. The personal equivalent being such an uncertain factor, it is impossible to lay down an unalterable dosage of quinine which will be applicable to all cases and which will yield universally good results. In two patients, under the same external conditions, suffering from malarial fever of the same type, a dose which will be quite effective in one may show little or no good in the other. In Central Africa it was found after experience that the best clinical results were obtained by apportioning to each individual such an amount of the drug as sufficed to produce in him an aural disturbance indicative of the commencement of quininism.

I am, Sirs, yours faithfully,

STANLEY KELLETT SMITH, F.R.C.S.,
Late Surgeon, Rhodesia Exploratory Expedition to Central Africa.

Liverpool, April 5th, 1897.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—It would seem useless to repeat arguments against midwives registration worn absolutely threadbare from reiteration. Nevertheless, as some of your correspondents appear to take an *ex parte* view of the scheme, may I offer a few remarks? Nobody can dispute that melancholy casualties occur at rare intervals from employing the Gamps—which, after all said, is only equivalent to having no attendance at all; but it is curious to note how the registration schemes have recently unearthed a state of affairs—i.e., the dire mortality due to Gamps—that nobody until quite lately seemed aware of. It should appear quite self-evident that if these fatalities exceed anything beyond rare occurrences the Gamps would not have held their own for so many generations past in country and other places where they have plied their craft, seeing how pronounced fatal cases of midwifery are. Further, if otherwise, it is impossible to conceive that in Continental countries where civilisation runs parallel with our own, and where legislative restraint has been at play for many years past, the mortality should exceed that of our own country. I am aware that certain undetermined factors such as contracted pelves, &c. (as amongst the Germans), have to be taken in to consideration; but it is preposterous to contend that these slender factors would suffice to strike a balance of mortality in favour of our own country if the damage due to midwives was anything like that represented by the witnesses who gave evidence before the Select Committee of the House of Commons. Granting, therefore, that I am correct in stating that the fatalities due to midwives are rare, I should like to ask Mr. Humphreys and his followers if such retrograde and revolutionary measures as the public have been edged on to anticipate are not likely to produce a greater mortality, taking all things into consideration, than already exists. I have remarked that the employment of Gamps is equivalent to having no attendance at all; but of what earthly use is it employing a registered

[1] I have not the report of the case by me, but my memory is very clear as to the above described symptoms.

midwife unless she is armed with ordinary therapeutic agents, such as antimony, ergot, opium, chloral, chloroform, or any other mortal drug? If she is allowed to use them she becomes, as Dr. Rentoul tersely puts it, a member of "an inferior order of medical practitioners"; if otherwise, and the State handicaps her from adopting the necessary treatment, the parturient woman might, and probably with greater safety would, be left in the hands of the Gamp. If, however, I am wrong as to these fatalities being rare—that is to say, the mortality being such as the promoters of registration appear to affect—let them then have the courage of their convictions, steer clear of all quackery, and move for an amendment of the Medical Acts so as to render it illegal for unqualified persons to practise midwifery for the purposes of gain—a procedure quite justifiable under such circumstances, and, moreover, consonant with the times, and infinitely preferable to bringing the rank and file of our profession in petty competition with a class of females; and God only knows (and I use the expression reverentially) where these will begin or where they will end.

I am, Sirs, yours truly,

Queen's-road, Peckham, April 3rd, 1897. CLEMENT H. SEBS.

"A VERY GRAVE SCANDAL."

To the Editors of THE LANCET.

SIRS,—Having been favoured with a copy of THE LANCET and a marked paragraph in it, I fear I might not be showing that respect for your journal which I have always felt if I passed over in silence the matter underlying "A Very Grave Scandal." Whether some correspondent has veiled his inaccuracies under anonymity, or whether the matter is a cutting from a newspaper or an annotation of your own, there is not even so much as an inverted comma to indicate. Out of regard to my own time and your space I do not propose to correct inaccuracy, but content myself with answering the question which you put in the last sentence. I might have shown that my telegram was designedly sent in emphatic terms in order to prevent a very grave scandal. The question you want answered is—In case the man ran amok at the workhouse and killed someone, who would be responsible? The answer cannot be given in a word—it is a complex one. The persons immediately responsible would be the guardians, because the case was remitted to their care by the justice; then the justice, for making an order for the reception of a lunatic into a workhouse where there is (not) proper accommodation (see Sec. 21, Lunacy Act, 1890); but, taking them in inverted order, primarily the local authority (Sec 238, Lunacy Act, 1890). The local authority is defined in Sec. 240 of the same Act to be the council of every administrative county—a council which is well represented on the Eastbourne bench of magistrates; and, if I mistake not, one of its most influential members was the very justice before whom this might-be dangerous lunatic was taken. The county council, then, is the power you must arraign in your court of censure for not having provided asylum accommodation.

As the person, perhaps, more immediately concerned than any other individual in the trouble and annoyance due to want of asylum accommodation, I am not likely to make light of the incident described as a very grave scandal; but there are proper and improper ways of discussing it, and a good case needs no exaggeration to bolster it up. But, Sirs, "all's well that ends well," and instead of giving you the opportunity of inserting another sensational headline, there has been no "horrible discovery" or other tragic outcome of a lunatic being remitted to a workhouse for fourteen days (as other lunatics are constantly being sent for various reasons other than want of accommodation in the county asylums). Rather a comedy than a tragedy has been enacted; for when the lunatic in question was again taken before the justice so that a reception order might be made for his admission into the county asylum in which there was then a vacancy, the "dangerous" lunatic was allowed to escape. He did not "run amok," but made his way peaceably enough into another union, where, I am told, he is now detained. I repeat your question—If, when he was in charge of the workhouse officials and escaped from them, he had run amok, who would have been responsible? Sensational headlines are not in harmony with the usual matter we expect to find in THE LANCET; but I dare say the insertion of the paragraph which has called forth this answer will have served someone's purpose, although it has failed to secure your endorsement.

I am, Sirs, your obedient servant,

THE MEDICAL SUPERINTENDENT.

East Sussex County Asylum, Hayward's Heath, April 5th, 1897.

"THE OFFER OF THE 'ROYAL RED BOOK.'"

To the Editors of THE LANCET.

SIRS,—Our attention has been drawn to a paragraph in THE LANCET concerning the suggested introduction into our "Royal Red Book" of a list of the various physicians and surgeons practising specially. We should be greatly obliged if you would publish the notice that the scheme has been withdrawn entirely. On receipt of a great deal of correspondence commenting on it from all points of view we laid the matter before the Royal College of Physicians, who have condemned it, and it is therefore withdrawn without demur, and we have returned the subscriptions already received. At the same time we should like to point out that we raised the question, "Would it not be unprofessional?" and the professional gentleman who proposed it to us was of opinion that it would not. Moreover, we have received a good many orders from well-known medical men; we think, therefore, that we may fairly be excused for falling into the error, our desire being always to take advantage of suggestions we think likely to increase the usefulness of the work. We looked upon it as an ordinary subscription to a book. We trust that you will publish this letter in order that as many of the profession as possible may be acquainted with the facts, so that any sense of irritation they may still feel may be speedily allayed.

We are, Sirs, your obedient servants,

THE PROPRIETORS OF "WEBSTER'S ROYAL RED BOOK."

Piccadilly, April, 1897.

*** We are glad to learn of this very proper decision on the part of the Proprietors of the "Royal Red Book."—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Royal Infirmary.

THE election committee of the Royal Infirmary met on March 24th to fill up the vacancy caused by the resignation of Dr. Davidson. As was anticipated, Dr. James Barr, junior physician to the Liverpool Northern Hospital, was the successful candidate. The intelligence of the death of Mr. Heywood Bright, the recently appointed chairman of the Royal Infirmary, which took place on March 24th, after an illness extending over some weeks, was received in the city with much regret. His term of office as chairman was but of short duration, he having been elected as recently as Feb. 11th, in succession to Mr. H. B. Gilmour, who resigned at the annual meeting. He had never been able to preside over the meetings of the committee, as at the time of his election to the chair he was suffering from the illness which terminated fatally. The deceased was related to the late Dr. Bright, the physician who first accurately described the disease now so well known as "Bright's disease."

Liverpool Medical Club.

Dr. F. H. Barendt read a paper on Specialism before the members of the above club a fortnight ago. He treated his subject from four points of view: (1) specialism in general; (2) specialism in relation to the lay public; (3) specialism in relation to the general practitioner; and (4) specialism in relation to the specialist. In tracing the gradual growth of specialism he predicted that the general consultant would gradually be replaced by the specialist—in fact, many present consultants had attained eminence in the profession through the special study of some system or organ. He urged the importance of a knowledge of languages, and quoted Sir James Simpson in support of this qualification. With regard to the general practitioner, he ventured to suggest that in his consultations he should seek the advice of those who had become qualified by special study of the disease in question, and who avoided all semblance of entering into rivalry with him. He considered it futile to expect that the relationship between

practitioner and specialist should be on the same lines as that between solicitor and barrister in respect to practice. Patients would never admit such a relationship. On the other hand, he urged that general practitioners might do much to prevent patients leaving them by recommending them to specialists so soon as they detected any restlessness on their part; it would increase their own prestige and restore the confidence of the patient, and in many cases prevent the evil of hospital abuse. Pure specialism did not exist; the specialties themselves overlapped, and treatment itself was far more often general than special. On the other hand, the specialist should bear in mind his *raison d'être* and not compete with the general practitioner. The second annual dinner of this club will be held at the Adelphi Hotel on April 7th, when the chair will be taken by Mr. Mitchell Banks, the senior surgeon to the Royal Infirmary.

Donation to a Liverpool Charity.

Mr. T. Sutton Timmis has sent a donation of £1000 towards the building fund of the new Consumption Hospital on Mount Pleasant.

April 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Royal Infirmary.

THE official proposal by the Lord Provost to celebrate the Diamond Jubilee by the partial reconstruction of the Royal Infirmary on its present site continues to receive criticism from both professional and lay quarters. The suggestion already advanced in my letter in your issue of March 20th, that the opinions of the medical, surgical, and sanitary experts, upon whose advice the Lord Provost says he is acting, should be published, has been reiterated by numerous correspondents in the *Glasgow Herald*, but has failed to excite any response from the authorities, and it seems to be doubtful whether any detailed scheme has really been considered or planned. Thus at a recent meeting of the committee a letter was read from Dr. J. B. Russell, in reply to a request from the Lord Provost, stating that in his opinion the present site was quite suitable for a hospital, but expressing his inability to give any opinion as to its suitability for the reconstructed hospital until the plans of this had been submitted to him. It is certain that no local expert opinion would have greater weight with the public than that of Dr. J. B. Russell, and yet it would appear that no definite scheme was placed in his hands when he was asked for an expression of opinion on the official proposal. Under these circumstances it is not unnatural that some suspicion should arise as to whether any definite scheme has really been formulated. The promoters of the movement will be well advised to issue a frank and detailed statement at an early date. The public has a right to expect it, and without it success is scarcely possible. Already certain rival schemes are beginning to be pushed from various quarters. One of these is the proposal to raise a sum of money for the purpose of completing the Homes for Consumptives at Bridge-of-Weir. The construction of these, as far as they have been completed, is highly satisfactory, but Mr. Quarrier, who has raised the money for the homes and is practically the proprietor, appears to be strangely reluctant to consult the committee of medical men appointed to advise him on various matters. At least nothing is heard of this committee or its views or recommendations, and it is difficult to believe that its members approve of one part of Mr. Quarrier's plan—viz., the erection of a dispensary in Glasgow at the cost of £3000 for the treatment of out-door patients. The present infirmaries and dispensaries already offer ample opportunities for such treatment, and to spend £3000 on a new dispensary will be simply a waste of money. Certainly the profession generally will not extend confidence to the proposals of Mr. Quarrier unless he can show that they are endorsed by Professor Gairdner and the other members of the committee. It is true that there is one medical practitioner enthusiastically in favour of Mr. Quarrier's scheme; but in his letters to the local press he modestly signs himself "M.D."

University of Aberdeen: Honours to Medical Men.

For the first time in the history of the University the honorary and ordinary graduates were capped together on the 2nd inst. The graduation ceremony took place in the Mitchell Hall in presence of a brilliant audience. Among those who received the degree of LL.D. *honoris causâ* were Mr. Edward Albert Schäfer, F.R.S., Professor of Physiology in University College London, and Examiner in Physiology for various bodies; and Sir Thomas Grainger Stewart, M.D., Professor of Medicine in the University of Edinburgh. The same degree was also conferred in absence on Dr. Alexander J. C. Skene, one of the leading physicians in Brooklyn, a professor in the medical faculty and President of Long Island College Hospital, and author of various works and papers. In order to mark the new departure the members of the Senatus gave a "reception" in Marischal College in the evening, which was largely attended. On Saturday Principal Sir W. D. Geddes and Lady Geddes entertained to luncheon the honorary graduates, the two deans who were promoters, and Dr. Stephenson, Professor of Midwifery, the Senior Member of the Senatus.

April 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Queen's Nursing Home, Steevens' Hospital.

A VERY influential committee has been formed, and circulars have been widely distributed, for the purpose of raising a sum of £5000 to build and equip a Nurses' Home in connexion with this old-established hospital. It is proposed to lay the foundation-stone of the new building on the anniversary of Her Majesty's accession in June next.

Royal College of Surgeons in Ireland.

Dr. Thomas Myles has recently resigned the position of Professor of Pathology in the Medical School of the College of Surgeons. A successor will be appointed on the first Tuesday in May. A number of candidates are already in the field.

Health of Belfast.

The working of the new Notification Act brings out clearly the deplorably unhealthy state of Belfast, as during the four weeks from Feb. 25th to March 24th 358 cases of zymotic diseases have been reported, and of these 215 were typhoid fever, 53 scarlet fever, 26 measles, 24 erysipelas, 12 diphtheria, 12 simple continued fever, 6 membranous croup, 4 typhus fever, 3 whooping-cough, 2 puerperal fever, and 1 chicken-pox. The deaths from zymotic diseases were 75. As to typhoid fever, even the public officer of health admits he had no idea himself of the extent of the prevalence of this disease. No part of the city seems free from it, and, as Dr. Whitaker says, "I think that there is no city or town in the kingdom in which this disease prevails to such an extent as with us." Scarlet fever is still very prevalent, but the type is mild. It seems very strange that neither measles nor whooping-cough, though so infectious, is on the list of notifiable diseases as enumerated in the Act of Parliament.

The County Down District Asylum.

In his very full and interesting annual report for 1896 (just published) the superintendent, Mr. Nolan, reiterates the view he has expressed in previous reports that, notwithstanding the large increment of lunatics in asylums, there is no considerable real increase in insanity through the country generally, although in a current number of a monthly magazine, in an article entitled "Which is the Maddest Part of the Kingdom?" the writer answers, by statistical diagrams, "Ireland." Mr. Nolan's opinion as regards Ireland agrees with that of the Commissioners of Lunacy in their recent report as regards England.[1] In the Down Asylum there were 660 cases (336 males and 324 females) under treatment during 1896. The number of cases admitted was 128, being 10 less than in 1895, and 31 less than in 1894. This asylum is being much enlarged and improved, and the "Plenum" system of ventilation is being introduced.

Reformatory and Industrial Schools.

Mr. John Fagan, F.R.C.S. Irel., of Belfast, has been appointed Inspector of Reformatory and Industrial Schools, in place of Sir R. Blennerhasset, who has been appointed to the Presidency of Queen's College, Cork. Mr. Fagan

[1] THE LANCET, April 3rd, 1897, p. 968.

has for a lengthened time been surgeon to the Belfast Royal Hospital, a post which he will now resign. Professor Sinclair will be promoted, it is believed, and become a full surgeon, and Dr. Mitchell will get his place as senior assistant surgeon.

April 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Appendicitis at the Medical Societies.

THE question of appendicitis continues to occupy the attention of the societies. At the Academy of Medicine M. Reclus has sided with M. Lucas Championnière in what he has already said in opposition to M. Dieulafoy, and argues that in appendicitis the *rôle* played by a previous entero-colitis is a very important one. If this theory has been stated rather late it is because no one thought of establishing the relationship; and the cases cited by M. Dieulafoy where there was entero-colitis without appendicitis prove nothing, for they date from a time when appendicitis was not known or inquired into. It is probable, according to M. Reclus, that the co-existence of these two diseases is much more frequent than is generally supposed. He himself recently saw with M. Oettinger a case in which the etiology was as plain as if it had been a laboratory experiment. A young woman wishing to rid herself of some thread-worms had the foolishness to take an enema containing seven and a half grains of corrosive sublimate. Although she almost immediately afterwards took a second enema to bring away the first, she presented all the symptoms of acute enterocolitis, with griping pains and the passing of membranous shreds. Eight days later she was attacked by appendicitis with all the classical symptoms. M. Reclus referred to many other cases reported by such observers as M. Brissand, M. François Franck, and others, and he considers that now that attention has been directed to this subject we shall arrive at fresh knowledge. He considers that the stagnation of fluids plays an important part in some cases, as where there is a kink at the level of the neck of the appendix.

Two Interesting Debates.

Two important discussions have been going on at the Therapeutical Society recently. The first dealt with the intolerance of certain drugs displayed by some patients, in particular as regards antipyrin. M. Lyon, M. Dalché, and M. Duchenne reported cases of stomatitis, pemphigus, and various rashes produced by antipyrin. M. Blondel related a case where the use of antipyrin produced buccal lesions in a woman exactly like mucous plaques and also a rash resembling syphilitic roseola, so that the diagnosis from syphilis was rendered very difficult. The majority of patients with this idiosyncrasy had no albuminuria, so that it did not seem to depend upon faulty elimination, but rather on some particular predisposition of the subject. It was possible that in many cases the digestion was at fault, for, on the one hand, these accidents more rarely followed the use of antipyrin in solution than as a powder, and, on the other hand, the drug was much better tolerated if given with bicarbonate of soda or some intestinal antiseptic. The second subject discussed was chlorosis and its treatment. M. Barbier read an important report dealing with all the various theories as to the causation of chlorosis. M. Fernet spoke of the various general intoxications which may bring about the same condition. M. Huchard strongly advocated the least possible use of drugs in treatment, but the employment of fresh air, rest, and strict hygiene. M. Albert Robin opposed the opinion advanced by M. Hayem, who distinguished two periods in chlorosis—that of "déglobulisation," when iron is harmful, and that of "reparation," when it is of the greatest service. M. Robin divided the anæmic, in whom oxidation is very slow, from those in whom the exchange of oxygen is very rapid. Iron he considered good for the first group and arsenic for the second, for these drugs have directly opposite properties, and it is important not to give the one in place of the other. The chemico-biological state of the patient is the guide as to which drug shall be employed. M. Bardet recommended the administration of hæmoglobin in preference to any other form of iron, it being easily assimilable. At the last meeting of the society M. Blondel spoke upon chlorosis considered as an intoxication produced by the absorption of the products of the secretion of the ovary—a very modern view. M. Blondel considered that it is not amenorrhœa which causes chlorosis, but chlorosis which causes amenorrhœa, and that the consequences of this last, which are always the same, whether in the natural menopause, or after castration, or from retarded puberty, are added to the symptoms proper to chlorosis, but must not be confounded with them. Amenorrhœa appears in chlorosis as in many other dyscrasias, such as tuberculosis, malaria, and enteric fever. The secretion of the ovary cannot itself be the poison of chlorosis, as Charrin had argued in that society; for the internal use of ovarian extract had a good effect in chlorosis, as he himself had found in common with Spillmann, Jacobs, Etienne, and others. However, the frequency with which chlorosis occurs in young women just at the time of puberty made it obvious that the genital function had something to say to it. M. Blondel considered that chlorosis arose from some defect in the blood-forming organs, especially the red bone marrow, a tissue very easily influenced by various toxins and organic poisons, as is exemplified by the well-known fact that infectious fevers accelerate the growth of children. It is possible, he thought, to make use of the well-known antagonism existing between the internal secretions of the thyroid and the ovary. That action of the thyroid which is known to increase the growth of the skeleton and so govern the bone marrow has for a counterpoise the secretion of the ovary which comes into play at puberty, causes the disappearance of the thymus, and stops osseous growth. If this secretion is ineffective or remains in abeyance the action of the thyroid and thymus are prolonged beyond the necessary limits, organic oxidation is delayed, the osseous growth goes on, the bone marrow is "fatigued," the blood formation suffers, and the alteration of the corpuscles (together with the insufficiency of oxidation) will partly explain the classic phenomena of chlorosis. In such cases M. Blondel recommended the restoration of the ovarian function by the use of ovarian extracts, hydro-therapeutics, bicycle riding, and similar exercise. He also spoke well of the administration of iron and extract of bone marrow.

The Generosity of Madame Charcot.

The widow of the late Professor Charcot has resigned the annual pension of 2000 francs which she received from the State in favour of other widows and children of professors or *Agrégés* of the Faculty of Medicine of Paris who have died without leaving provision for their survivors. Madame Charcot has refunded all the money that she has received from the pension since the death of her husband.

Hospitals for Tuberculous Patients.

The authorities of the *Assistance Publique* have adopted in its entirety a plan for dealing with this subject drafted by M. Grancher and M. Thoinet. Special wards for tuberculous patients are being erected in three hospitals (the Lariboisière, the Tenon, and the Laënnec) to accommodate 600 patients. Three sanatoria are being constructed in other hospitals (the Broussais, the Cochin, and the St. Antoine) which will afford room for 600 more. Special precautions will be taken in the waiting-rooms, and deep spittoons will be lavishly provided. The idea of founding a special hospital at Brévannes has been abandoned owing to the opposition of the residents.

The Cost of the Plague.

The Chamber has unanimously passed a Bill to allow a sum of 297,000 francs to be set aside for the payment of expenses incurred on account of defensive measures taken against the plague. The introducer of the Bill, M. Bouge, congratulated the Chamber on the success of the measures proposed by France at the recent Sanitary Conference.

April 5th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The New Tuberculin.

A GREAT sensation was caused by the announcement made by Wolff's Telegraphic Agency that Professor Koch has discovered a new and powerful remedy against tuberculosis, and the last number of the *Deutsche Medicinische Wochenschrift* contains a detailed account of the investigations on the treatment of tuberculosis with which he has been

engaged since his first publications on the subject appeared in 1890. In the introductory part of his paper Professor Koch makes some general remarks on immunisation, saying that—unlike cholera, typhoid fever, &c., which confer immunity against subsequent attacks—an infection by the tubercle virus predisposes to new attacks of tuberculosis. But there are nevertheless indications that under certain circumstances an immunisation may take place. These circumstances are present in the experimental tuberculosis of guinea-pigs and in the general miliary tuberculosis affecting the human subject, where at a certain stage the bacilli completely disappear. Immunisation is therefore apparently attained when the whole body, as in general tuberculosis, is invaded by great masses of tubercle bacilli and when these bacilli come in direct contact with normal tissue. Professor Koch accordingly endeavoured to produce analogous bodily conditions in the hope of arriving at artificial immunisation. He first experimented by extracting tubercle bacilli with decinormal caustic soda. The fluid obtained in this way was not free from bacilli, for in a field of the microscope there were from five to ten of them to be seen, lying separately, not in heaps; they were, of course, dead. This preparation is designated as TA (i.e., Tuberkulin, Alkalisches), and produces when administered reactions quite similar to those of the old tuberculin of 1890; relapses were, however, less frequent. But there was one drawback: when more than a certain dose was given suppuration occurred at the place of the injection, the abscesses being due to the presence of dead tubercle bacilli in the preparation. The fluid was therefore filtered and the bacilli completely removed; when this was done suppuration was avoided, but the action of the TA was still identical with that of the old tuberculin of 1890. As, moreover, the fluid was easily spoiled and required constant fresh preparation, Professor Koch finally abandoned the TA and proceeded to other experiments. Having found that normal tubercle bacilli are not easily absorbed by the organism, he endeavoured to facilitate their entrance into the body by mechanical means. He has made the very interesting discovery that the bacilli are covered with a layer of a fatty acid which makes their absorption difficult, and which must therefore be previously removed. This he accomplished by triturating dried cultures in an agate mortar. After some time only a few bacilli remained entire, and they were got rid of by dissolving the mass in distilled water and treating the solution in a powerful centrifugal apparatus. In this way the fluid was divided into two layers: (1) an upper one not containing any tubercle bacilli, and designated as TO (i.e., Tuberkulin, Oberst); and (2) a lower one, which consisted of a colloid sediment with a few bacilli, and was designated as TR (i.e., Tuberkulin, Rest). The TR was then again dried, pulverised, and treated as before in a centrifuge, the process being repeated till the last bacillus was destroyed and the whole fluid became perfectly transparent. This product caused no suppuration and was easily absorbed. The action of TO is very like that of the old tuberculin and the TA, with the exception that it does not cause suppuration. Its immunising action is very slight, whereas that of the TR is very marked. When an excessive quantity is administered to tuberculous patients it, of course, sets up reaction, both local and general, but its immunising effect is quite independent of this; whilst with the old tuberculin and with the TA and TO reactions are necessary for an immunising effect. Such reaction must be avoided in TR. A man immunised by TR does not show any reaction when he is treated with TO and TA, so that he is immunised against every constituent of the bacillus. For the preparation of TR the most virulent and recent cultures must be used. The processes are very dangerous owing to the fact that living bacilli of high virulence have to be pulverised in an open mortar; indeed, Professor Koch felt as anxious as if he had to do with an explosive substance, and he points out that in making tuberculin on the large scale every care must be taken to prevent the bacilli from being scattered about, adding that this can only be done in a large factory. The Hoechst factory has been entrusted by him with the preparation of the TR. In making use of the TR it is administered by injection into the back with a well sterilised Pravaz syringe. One cubic centimetre of TR, containing 10 milligrammes of the dry substance, is mixed before use with weak sodium chloride solution, and in the first injections $\frac{1}{10}$ milligramme of the substance is given. Injections are to be made every second day, and the dose is progressively increased until it amounts to 20 milligrammes. When the temperature rises the injections must be stopped for some time. Guinea-pigs treated in this way were so completely immunised that injections of virulent cultures had no effect on them. When TR was administered after an injection of tubercle bacilli a marked regressive metamorphosis of the tuberculous organs was observed. Full immunity is only attained two or three weeks after the administration of the maximum dose both in the case of the lower animals and in the human subject. In the beginning of the treatment there is no apparent effect and no impression is made on the tuberculous state until half a milligramme or one milligramme has been given, so that patients who are likely to live only a few months should not be subjected to the treatment. Also patients suffering from secondary infection by streptococci and those in whom septic processes complicate the tuberculous affection will not derive any benefit from it. Temperatures exceeding 38° C. (100·4° F.) indicate a mixed infection and thus render the patient unfit for the TR treatment. Professor Koch has administered the TR to a great number of patients, especially sufferers from lupus, and in nearly every instance an improvement occurred—he did not say a "cure," because the time during which a relapse might take place was not yet past. In lupus it was especially remarkable that, notwithstanding a very small local reaction, the disease became less. This result is the reverse of that which was found to occur with the old tuberculin, where the therapeutic effect depended on the degree of the local reaction. In pulmonary tuberculosis the only local reaction observed after the administration of TR was a temporary increase of the catarrhal symptoms. After a few injections the sputum decreased in quantity, and at last it disappeared. In no instance did the general health suffer, nor were any undesirable symptoms observed. The patients' weight increased, and their temperature remained normal. Professor Koch concludes that probably the methods of administration may be improved, perhaps by combination with serum; but he thinks it will be impossible to improve the preparation itself.

It is to be hoped that Professor Koch's work, which undoubtedly is of the highest theoretical interest, will prove to be of practical value. The public and the lay press, remembering the collapse of the expectations aroused in the year 1890, are rather reserved on the subject, so that disappointments similar to those of the first tuberculin era will probably be avoided.

April 6th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Price of Panic.

"WHAT the 'pestis bubonica' costs the Treasury" is at present agitating Italy, whose impecuniosity can ill bear the additional burden of diminished harbour dues and money compensation for excess of sanitary jurisdiction. The opening of the year found her, principally at her seaports, quite "off her head" from panic at the apprehended invasion of the "pestis bubonica," in illustration of which the following incident and its financial sequelæ are not likely to be soon forgotten. On Jan. 22nd there arrived at the harbour of Ancona the English steamship *Glenorchy* with a cargo of jute, hailing from Calcutta. According to the regulations issued by the Board of Maritime Sanitation on Dec. 29th preceding, and applicable, as against the importation of the "pestis," to all ships hailing from countries beyond the Straits of Bab-el-Mandeb, the *Glenorchy* was forthwith subjected to sanitary inspection and to all the prescribed disinfecting processes. These being duly performed and certified the *Glenorchy* on the afternoon of the same day was admitted to "free course" (*libera pratica*). That evening, however, there reached the Prefect of Ancona a telegraphic order to send to the sanitary station of Alberoni, in Venetian waters, for visitation and disinfection, all ships arriving from British India. This order, as a prophylactic measure, was, in consequence of information received by the Prefect and of instructions forwarded from Rome, declared applicable to the *Glenorchy*. There arose, in fact, the

doubt, after that ship's admission to "free course," whether the said admission was legal. This doubt was more than accentuated by the panic in Ancona due to an arrival from suspected shores—a panic which seems to have been shared by the law advisers of the Commune, who threatened to absolve themselves of all responsibility should the dreaded consequences ensue on the admission of the *Glenorchy* to free course being sustained. So, "*per assicurare anzi tutto la tutela dell' ordine pubblico*" (to ensure above all things the safeguard of public order), the *Glenorchy* was made to comply with the detaining ordinance. Against this, however, her captain, in the name of the eminent London house which employed him, formulated a regular protest, and this in due course came before the Italian Government. The captain's plea was found, on expert consideration, to be, indeed, a strong one, and the Government, convinced of the advisability of avoiding an appeal to the law courts, and in consequence of negotiations conducted between the Minister of Foreign Affairs and H.B.M. Ambassador, Sir Clare Ford, saw it expedient to accept the claim for indemnity advanced by the captain, to pay him 10,000 lire (£400), and to quash all further procedure on account of the enforcement of the detaining ordinance against the *Glenorchy*. As I have said, the incident has made a profound impression on a kingdom chronically suffering from what Lord Beaconsfield called "that ignoble melancholy arising from pecuniary embarrassment"; and even if the findings of the International Sanitary Conference were less significant than they are against "excess of sanitary jurisdiction," the mulcting of the Treasury in £400 for what was simply a concession to unenlightened panic will teach Italy a lesson she stood much in need of. In fact, she is gradually coming to see that sanitary and hygienic reform is a much less expensive policy than her traditional system of "maritime boycotting," and that if she were better protected at home she would have less reason to dread epidemic invasion from abroad.

Psittacosis.

The "pestis bubonica" has had its pathological "sidelights," and one of these has been the demonstration—formerly a vague suspicion—of the power possessed by lower animals of conveying infective disease. A curious illustration of this power comes from Genoa, where the Civico Ufficio d'Igiene has just had to warn the citizens by circular against keeping parrots as domestic pets. A family named Rivalta in that seaport had been presented with one of these birds, and shortly thereafter its members, one after the other, became affected with broncho-pulmonary symptoms which took a rapidly "pernicious" course, carried off the father and mother, and placed the rest of the household in imminent danger of their lives. Similar cases of pneumonia, traced to the same cause, threw the population into panic, to allay which the Civic Office of Hygiene had to intervene with the following manifesto: "Parrots are susceptible of a peculiar infective disease very easily communicable to persons coming in contact with these birds when so affected. The disease, known by the name of 'psittacosis,' betrays itself in marked broncho-pulmonary disorder which very often runs a fatal course. Two parrots, recently arrived in Genoa by the steamship *Manilla*, set up two 'focolai' (centres of infection) of the aforesaid disease, and this has caused a number of victims. The best mode of avoiding so grave a risk is not to keep parrots; when they cannot be parted with all caressing of them or contact with them should be discontinued, especially if they show signs of malaise. In this latter case recourse ought at once to be had to the Uffizio Municipale d'Igiene. Such precautions are all the more indispensable as, in the day now passing, there have occurred cases of 'psittacosis'—a grave but easily avoidable malady." Some three years ago THE LANCET [1] described the illness and death from broncho-pneumonia of a well-known Florentine family, supposed to have contracted ptomaine poisoning from the consumption of unsound fish. At the time there was a counter explanation of the malady on the part of more than one consultant, who traced it to the presence of parrots as domestic pets in the household. This latter theory, which, in spite of the medical certificate, had strenuous supporters, seems to derive confirmation from the Genoese incident, and the case it accounted for may henceforth be cited as one, not of "death in the pot," but of "disease in the parrot."

April 4th.

[1] THE LANCET, Nov. 17th, 1894, p. 1169.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Physicians' Claims against Patients' Estates.

A BILL has been introduced into the New York Legislature having for its object the compulsory payment of physicians' bills against estates of dead patients. It provides that every executor and administrator must proceed to pay the debts of the deceased in the following order: (1) Debts entitled to a preference under the laws of the United States; (2) taxes assessed on the property of the deceased previously to his death; (3) debts of the deceased, because of services rendered and materials furnished by physicians, pharmacists, nurses, and undertakers; (4) judgments docketed and decrees entered against the deceased according to the priority thereof respectively; and (5) all recognisances, bonds, sealed instruments, notes, bills, and unliquidated demands and accounts. Preference shall not be given in the payment of a debt over other debts of the same class, except those specified in the fourth class. All debts specified in the third class shall become due upon the death of the deceased and shall be paid within ninety days thereafter.

Compulsory Reports of Cases of Phthisis.

The action of the New York Board of Health requiring physicians to report all cases of tuberculosis has excited much opposition in the profession. The committee on hygiene of the Medical Society of the County of New York, however, endorses the recent mandate of the health board concerning compulsory notification of cases of pulmonary phthisis as follows: "Realising the need of proper measures to prevent the spread of pulmonary tuberculosis, and regarding it as an essential preliminary that all physicians be impressed with the importance of making an early diagnosis of the same by microscopical examination of the sputum, we earnestly recommend that physicians avail themselves of the offer of the bacteriological department of the board of health to make such examinations. We approve of the compulsory reporting of cases of pulmonary tuberculosis, if the inspectors are forbidden to visit or to have any communication with the patients without the consent of the attending physician, believing that the attending physician is capable of giving all necessary instruction."

The Contagiousness of Pulmonary Phthisis.

Colorado Springs, Colorado, in the Rocky Mountains, is a famous resort for phthisical patients. Dr. Solly of that city, son of the late Mr. Solly of London, thus speaks of the contagiousness of that disease in that climate: "At least a third of our population are consumptives. The town, which contains some 15,000 people, has been established twenty years. An inquiry made by disinterested physicians into the number of cases of consumption that were known to have originated in the town resulted in a report of twenty in all. Although it is probable that our brilliant sunshine and dry air more quickly destroys the vitality of the bacilli than your eastern atmosphere, yet in the poorer lodging-houses of the town there are many ill-ventilated rooms, inside or on the north side of the building, inhabited by consumptives and their families, where recklessness of expectoration and carelessness of ordinary cleanliness are marked features of their domestic *ménage*; yet cases of contagion do not average more than one a year. At Colorado Springs the consumptives mingle with the other residents of the city on all occasions, at church service, theatre, concerts, and in the over-heated and crowded rooms of private residences during social functions; they reside in the same hotels, boarding-houses, and private dwellings with those not afflicted with the disease, and no attempt at isolation has been made. Notwithstanding this apparent indifference on the part of the local authorities to the contagiousness of the disease, only twenty cases have originated in Colorado Springs in twenty years."

New York Saturday and Sunday Association.

The total of last year's collections was $22,190.76 from churches, and $58,919.45 from other sources. Bed patients numbering 30,700 were cared for. Of these 23,271 were free. Medical aid was given to 250,000 free dispensary patients. The executive committee in their statement set forth that the hospital expenses of the past year were $1,323,238.15, with an income of $292,581.83 from funds invested, from paying patients $299,996.79, and from the city $66,047.91. The

association now embraces thirty-eight hospitals, and the collection is divided among them on the basis of free work performed by them during the year preceding on behalf of the poor.

Fined for "Spitting" in the Cars.

The first case of arrest and punishment of a person for violating the health ordinance against "spitting" in the cars occurred a few days since in this city. A passenger on one of the street cars expectorated very freely and without regard to the ordinance which was posted conspicuously in the car. At length the conductor called his attention to the rule of the health board and requested him to comply with it. He at once became abusive and began to expectorate around the car, whereupon he was summarily ejected and handed over to the police. On the following day he was arraigned in the magistrate's court, where the conductor of the car preferred charges against him for violating a health ordinance. His defence was that he had a severe cold and was obliged to expectorate freely. The court fined him five dollars.

Quarantine Measures against the Bubonic Plague.

In view of the alarming nature and spread of the bubonic plague now prevailing in India and the adjacent countries, and in view of the danger of this scourge being brought to the United States, Congress has adopted a resolution that at any port or place in the United States where the Secretary of the Treasury shall deem it necessary for the prevention of the introduction of contagious or infectious diseases incoming vessels, vehicles, or persons shall be inspected by a national quarantine officer; such officer shall be designated or appointed by the Secretary of the Treasury on the recommendation of the Surgeon-General of the Marine Hospital Service; and at any such port or place no vessel, vehicle, or person shall be admitted to entry without the certificate of the said officer that the United States quarantine regulations have been complied with.

March 19th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Small pox at Melbourne.

FOR the second time during the last few years the strict quarantine regulations in force in Victoria have failed and small-pox cases have been landed in Melbourne. The steamer *Nineveh* was inspected by the port health officer at Port Phillip Heads, given a clean bill of health, and came up to Melbourne, where her passengers were landed. Some of the crew had, however, suffered from ill health of a suspicious character, and Dr. Gray, the assistant medical officer of the Board of Health, made further investigation and discovered that they were either suffering or convalescing from small-pox in a mild form. The ship was at once quarantined and the health authorities, with the assistance of the police, succeeded in tracing almost all the passengers, who were placed in quarantine and vaccinated; and the action taken was so prompt and energetic that apparently no harm has been done. The occurrence, however, shows the necessity of appointing a man with special knowledge to the position of port medical officer, which is being temporarily filled until a permanent successor is appointed to the late Dr. Browning. At present there are three port medical officers—one at "The Heads" and two at Williamstown—and most of the large steamers and mail boats are examined at the latter place. It is suggested that all vessels should be examined at "The Heads," as was formerly the custom.

The Health of Sydney.

The annual report of the medical officer of the Sydney Water and Sewerage Board (Mr. Kendall) stated that, although the year 1896 exhibited remarkable extremes of heat and cold and great unevenness of rainfall, the general health of the metropolis was much improved, and notwithstanding the increase of typhoid fever during the year the general death-rate was lower than in preceding years. The zymotic death-rate had fallen from 2·4 per 1000 in 1895 to 1·3 in the city, and in the suburbs from 2·6 to 1·1. The mortality from diarrhœa had fallen from 7·0 per 10,000 to 6·1 per 10,000, and, as before the installation of the water and sewerage system the rate was 10·5 per 10,000, it was only fair to attribute at least a portion of the good result to the operations of the board. The mortality from diphtheria showed only a small decrease, and in certain districts it appeared to be endemic. Still, as the board had been extending its operations the mortality had fallen from 4·1 per 10,000 to 2·07. The mortality from phthisis in the metropolis had been reduced during the last nine years from 20 to 10·5 per 10 000 The death-rate from typhoid fever had increased to 4·2 per 10,000 from 1·92 for 1895. Mr. Kendall is inclined to ascribe the continued prevalence of typhoid fever to the breaking up of sewage-soaked soil in the extension of the sewerage works. More than half the cases did not arise in the city, but came from outside to get treatment. Typhoid fever was exceptionally prevalent among school children, and Mr. Kendall urges a thorough investigation of the sanitary condition of schools, and the Education Department has accordingly undertaken to reorganise the sanitary arrangements of the public schools

Phthisis in New South Wales.

In the year 1894, 1 in 14·5 of the total deaths, or 1 in 1201 of the population, of New South Wales was due to pulmonary phthisis, and of the total 1042 deaths 494 of the deceased persons were born in Australia, and only 71 had been less than five years in the colony. Practically hardly any accommodation is provided for cases of phthisis. The general metropolitan hospitals and convalescent homes only admit cases for the relief of temporary complications, and a small but varying number are admitted. During the last three years at the Prince Alfred Hospital, Sydney, 20 per cent. of such cases died, the rest were discharged with the advice "to go into the country." But how are they to go? their only means of livelihood being in the towns. Some time ago Dr. Sydney Jones suggested the establishment of sanatoria in the country for such cases, but nothing has been done. Now Dr. Sawkins, medical superintendent of the Prince Alfred Hospital, has made another suggestion. Many country hospitals are situated in climates suitable for incipient and non-progressive cases of tubercle, they are maintained at the public cost, but are hardly ever more than half full; and Dr. Sawkins suggests that the unoccupied beds in these institutions should be utilised for the reception of suitable cases of phthisis to be sent there from the metropolitan hospitals.

The Board of Health and the Dairymen in New South Wales.

Under the Public Health Act for New South Wales, passed last November, the Board of Health was empowered to administer the Dairies Supervision Act, the provisions of which were made to apply to cream, butter, and cheese—in short, to the whole dairying industry. The Board has drawn up a manual of instructions for the dairymen, and its inspectors and veterinarians are investigating and reporting, with the result that a number of dairymen are protesting against the stringent clauses of the Act. These clauses have been really in operation since 1886, but the local authorities did not enforce them. Now the Board is compelling the municipal bodies to carry out the provisions of the Act. In some districts milk vendors have closed their business rather than comply with the requirements. On the other hand, the suppliers of dairy produce for export have all along observed the conditions laid down, and are glad to see them enforced on all.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Gonner and Dr. Burckhardt, *privat-docenten* of Surgery, have been promoted to Extraordinary Professorships.—*Erlangen:* Dr. Specht has been appointed Professor of Psychiatry in succession to Professor Bumm; and Dr. Heim of Würzburg has been appointed Extraordinary Professor of Hygiene.—*Kiel:* On the occasion of the centenary of the Emperor William I. Professor von Esmarch has been granted the title of Excellency.—*Lemberg:* Dr. Ladislaus Szymonowicz of Cracow has been appointed Professor of Histology and Embryology.—*Prague:* Dr. Boennecken of Bonn has been appointed Extraordinary Professor of Odontology, with charge of the Dental Institute; and Dr. J. Thomayer, Extraordinary Professor of Special Pathology and Therapeutics, has been granted the title of Ordinary Professor.—*St. Petersburg (Military Medical Academy):* Dr. A. Likhacheff has qualified as *privat-docent* of general pathology.—*Vienna:* Dr. Franz Chvostek, *privat-docent* of Internal Medicine, has been appointed Extraordinary Professor.—*Zurich:* Dr. H. Müller, *privat docent* of Internal Medicine, has been appointed Extraordinary Professor.

Obituary.

WILLIAM HICKMAN, J.P., M.B. LOND., F.R.C.S. ENG., D.L.

WILLIAM HICKMAN of 122, Harley-street, and Camberlot Hall, Sussex, Surgeon-in-Ordinary to the Duke of Saxe-Coburg and Gotha, died at his residence in Harley-street on March 27th. He was educated at University College Hospital and took the degree of M.B. of the University of London in 1860 and became a Fellow of the Royal College of Surgeons of England in 1861. While at the hospital he held the posts of house surgeon, house physician, and ophthalmic surgical assistant, while his essay "On Some Varieties and Effects of Cancerous Disease of Bone" gained for him the Liston Surgical Gold Medal in 1860. After a prolonged visit to the East, he returned to London and set up in general practice in Dorset-square, N.W. He was surgeon to the Western General Dispensary, and for a time surgeon to out-patients at the Samaritan Free Hospital. At this time he published various cases and observations in the medical papers and societies' transactions; among these there are two specially interesting cases of transposition of the viscera recorded in the twentieth volume of the Transactions of the Pathological Society. Mr. Hickman was a past president of the Harveian Society, and in his presidential address (1883) on "The Aids and Hindrances to the General Practitioner" he advocated two reforms which have since been adopted—viz., the addition of a fifth year's study to the medical curriculum and the direct representation of general practitioners on the General Medical Council. He had thoroughly at heart the welfare of the general practitioner, and in this address he suggested a post-graduate system for their benefit. His plan was that the younger members of the hospital staffs should teach the students, and that the seniors should devote themselves to lecturing and demonstrating to medical practitioners. In 1885 Mr. Hickman exerted himself to bring about the amalgamation of the two Royal Colleges of Physicians and Surgeons into a Royal College of Medicine with power to grant the degree of Doctor of Medicine. He wrote, spoke, and originated a memorial to the Presidents of the Royal Colleges in favour of this scheme, which has been such a burning question since. Mr. Hickman pleaded for a degree-conferring Royal College of Medicine which would be retrospective and admit all those holding the qualifications of the two London Colleges to an M.D. degree. It was not intended to supersede the University of London, but to promote the interests of the rank and file of the students of the metropolitan hospitals. His arguments were always dignified, convincing, and the outcome of sound, shrewd, common sense, and, though it is perhaps hardly generally recognised, he did much to improve the status and education of his professional brethren.

In the spring of 1892 he received the appointment, in succession to Sir Oscar Clayton, of Surgeon-in-Ordinary to H.R.H. the Duke of Saxe-Coburg and Gotha. In 1865 he married Emmeline, youngest daughter of the late Mr. Thomas Lea, and by her had one son, Dr. H. R. Belcher Hickman. The primary cause of Mr. Hickman's death was malignant disease of the sigmoid flexure; this necessitated colotomy in May, 1896. After this he temporarily improved, but before Christmas, 1896, signs of secondary growths in the liver appeared, and he died after some months of constant suffering in his sixty-first year.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ludwig Hollaender, Professor of Odontology and Director of the Dental Institute of the Berlin University, in his sixty-fifth year. In early life he had practised as a medical man in South Africa.—Dr. de Marbaix, in Louvain, in consequence of a malarial affection contracted in the Congo, where he had lived for some years, and is well known as the founder of the Bacteriological Institute in Bonn and for his researches on the diseases of that part of Africa.—Dr. Michel Stukovenkoff, Professor of Dermatology in the University of Kieff.—Dr. Eugène Afanassieff, formerly Professor of Medical Pathology in Kieff.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the Second Examination of the Board in the subjects indicated, viz.:—

Monday, March 29th:

Anatomy and Physiology.—Robert Cyril Turnbull, student of London Hospital; Godfrey Russell Potter and Benjamin Gowing, Yorkshire College, Leeds; Thomas Adam and Herbert Alfred Mason Firth College, Sheffield; Charles Ferrier Walters, Claude Alfred Heath Gee, Frederick Williams Cotton, and Alfred Coleridge, University College, Bristol; Reginald Shirley Burd and Arthur John Awdry, Mason College, Birmingham; William Nicholson, John Hoyle, and George Edward Seville, Owens College, Manchester; William John Young, William Arthur Bailey, and Robert Jaques, University College, Liverpool; Cyril Raymond Mass, Oxford University and University College, Liverpool; and William Warwick James, Middlesex Hospital.

Anatomy only.—William Morgan James, Cambridge University; and Thomas Arthur King, Cambridge University and St. Thomas's Hospital.

Twenty gentlemen were referred in both subjects, one in Anatomy only, and three in Physiology only.

Tuesday, March 30th:

Anatomy and Physiology.—Ernest Russell-Risien and Ernest Wethered, St. Bartholomew's Hospital; Arnold Edward Soden, McGill University, Montreal, and St. Bartholomew's Hospital; Arthur Pearson, Alan Carpmael Ransford, Frederick Curtis, and William Howard Edwards, Guy's Hospital; Edwin Wallace Goble, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; Zebulon Mennell and John Wishart Little, St. Thomas's Hospital; Stanley James Kerfoot and Lewis Eccles Hertslet, London Hospital; Arthur Gentry Pitts and Burton Alexander Nicol, Charing-cross Hospital; Herbert Hugh Blair Cunningham, St. Mary's Hospital; Edward Mello Saunders, King's College, London; John Howard Addinsell, University College, Liverpool, and King's College, London; and William Wijeyesaker, Ceylon Medical College and University College, London.

Anatomy only.—Mr. Henry Joseph Butler, Carmichael College, Dublin, and St. George's Hospital.

Physiology only.—Walter George Douglas Miller, Cambridge University and University College, London; Leslie Frederick Enthoven, Cambridge University and Mr. Cooke's School of Anatomy and Physiology; Thomas Langton Butler, St. Mary's Hospital; and Orme Stirling Kellett, Cambridge University, London Hospital, and Mr. Cooke's School of Anatomy and Physiology.

Thirteen gentlemen were referred in both subjects, four in Anatomy only, and one in Physiology only.

Wednesday, March 31st:

Anatomy and Physiology—Reginald Gauld, London Hospital; Hugh Stannus Stannus, Robert James Harris, and Saville Waldron Hanbury, St. Thomas's Hospital; Subrid Nath Chowdry, University of Calcutta and St. Thomas's Hospital; John Wilfred Nunn and Herbert Ernest Ashley, St. Bartholomew's Hospital; William Bastian and George William Morris Pritchett, University College, London; William Arthur Durance and Herbert Hallilay, Westminster Hospital; William Vare Chalmers Francis, Westminster Hospital and Mr. Cooke's School of Anatomy and Physiology; James Frederick Robinson and Francis George Cross, Guy's Hospital; Iain Mackinnon Jefferiss and Dudley Beckit Truman, King's College, London; and Ernest John Manning, St. Mary's Hospital.

Nineteen gentlemen were referred in both subjects.

Thursday, April 1st:

Anatomy and Physiology.—Robert Dunstan, Alec Leslie Matthews, and Michael Foster Reaney, London Hospital; Albert Remington Hobbs, Ernest William Holyoak, Charles Hildred Brodribb, and George Barnes, St. Mary's Hospital; Herbert Raymond Bateman, John Coates, and Thomas Henry Edwards, St. Thomas's Hospital; Henry Arthur Bramsden Bransbury and Walter Fedde Fedden, St. George's Hospital; William Henry Loosely and Charles Edward Hicks, Guy's Hospital; Maurice Gilbert Hannay, Charing-cross Hospital; Robert Lewis Thornley and Alexander Robert Tweedie, St. Bartholomew's Hospital; Felix Anthony Boisstere and William Henville Lowman, King's College, London; and Charles Visger, University College, London.

Sixteen gentlemen were referred in both subjects.

Friday, April 2nd:

Anatomy and Physiology.—Roy Henry Rollinson Whitaker, Maurice Guy Winder, Francis Musgrave Howell, Ernest George Smith, Arthur Tregelles Pridham, and Charles Archibald Scott Ridout, St. Bartholomew's Hospital; Philip Hedgeland Ross, Otago University, New Zealand, and St. Bartholomew's Hospital; Edward Cohen, Robert William Basil Hall, and David Forsyth, Guy's Hospital; John Ford Northcott, Cambridge University and Guy's Hospital; Henry Lloyd Driver, John Aylward Churchill, and Thomas Crisp English, St. George's Hospital; Frederick Charles Carlé and Alfred Carleton Williams, King's College, London; Godfrey Brookes Dixon, Charing-cross Hospital; Sydney Pern, Archibald Douglas Jameson, and Sydney Hunt, St. Thomas's Hospital; Hardy Vesey Wells, St. Mary's Hospital; Norman Navarra, Middlesex Hospital; Alfred Richard Spencer and David Leighton Davies, University College, London; and Hermann Balean, London Hospital.

Twelve gentlemen were referred in both subjects.

Saturday, April 3rd:

Anatomy and Physiology.—Richard Horace Paramore, St. Bartholomew's Hospital; Ernest Henry Bonney and Sydney George

Harrison, Charing-cross Hospital; Edward Norman Tilly Rogers and Cecil Rodney Rickard, Middlesex Hospital; Percy Harold Ward, Guy's Hospital; John Tattersall, St. Mary's Hospital; Frank Miller Bingham, St. Thomas's Hospital; William Benjamin Batchelor Taylor, London Hospital; Laurence Jones, St. George's Hospital; and William MacLellan, Edinburgh University.
Four gentlemen were referred in both subjects.

UNIVERSITY OF GLASGOW.—The following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch B.) in the subject or subjects indicated (A., Anatomy; P., Physiology; and M., Materia Medica and Therapeutics):—

Robert Fisher Ballantyne (M.), James Napier Baxter (M.), James Freeborn Bennett (A., P.), Andrew Brownlie (A., P.), John James Buchan (M.), William Adam Burns (A., M.), Thomas Bullough Calland (P.), Ranald Douglas Campbell (A., P., M.), James Carruthers, M.A. (A., P., M.), James Robert Chalmers (A., P.), William Crerar (A.), John Cullen (M.), Charles Cheven Cumming (A., P.), John Ronald Currie, M.A. (M.), Archibald William Wallace Davidson (A. P.), David Curr Douglas (A.), James Drummond (A., P.), Binnie Dunlop (P., M.), Hugh Campbell Ferguson (A., P.), William Gibson (A., P.), James Garden Green (P.), David Sloan Harvey (M.), Thomas Inglis (P.), Nicol Jamieson (A., P.), Andrew Kerr (A., P.), Andrew Stewart Lang (M.), Robert Lunan (A.), Ramsay Millar (A.), Hugh Miller (A., P.), Norman M'Leod Miller (A., P.), Ernest Wardlaw Milne (M.), James Hogg MacDonald (A., P.), Peter MacIntosh M'Fadyen (A., P.), John M'Gilchrist (A., P.), Charles Forbes Maclean (A.), Norman Forbes Macleod (A. P.), Alfred Robert Maclurkin (A., P.), John M'Millan (A., P.), William Gardner Neill (M.), Alexander Duncan Nicolson (M.), John Patton (A., P.), William Alexander Riddell (A., P.), Arthur Robin (A., P.), James Scott, M.A. (A., P.), James Shearer (A., P.), David Ap-Simon (P., M.), Andrew James Smith (M.), David James Smith (A., P.), James Smith (M.), James Johnston Smith (P., M.), Peter Alexander Steven (A., P.), Alfred George Stewart (A., P.), Andrew Taylor (M.), Charles Pinkerton Thomson (A., P.), William Brown Thomson (A.), Henry Nisbet Turner (M.), William Webster (M.), Alexander Simpson Wells, M.A. (A., P.), William Wright (A.), and John Doctor Young (A., P.). Women—Sarah Davidson (A., P.), Marjorie King Henderson Fleming (A.), Jessie Downie Granger (A., P., M.), Jane Grant (M.), Mabel Hardie (A., P.), Jessie Sophia Beatrix Hunter (P., M.), Ina Lochhead M'Neil (A., P.), Jean Effie Prowse (M.), Sara Maude Robertson (A.), Maude Spencer (A., P.), Gertrude Florence Fleetwood Taylor (A., M.), and Grace Lorrain Young (A., P., M.).

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

(*a*) *Including Pathology.*—John Donald, George Murray, Archibald Stevenson, and Alexander James Thompson Swann. (*b*) *Not including Pathology.*—John James Edgar, William Humphreys Jamison, George Moreland, James M'Caig, David Wallace Smith, and Alexander Waugh.

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):—

John Aitken (P., M.), George Alexander (P., M.), Alexander Smith Allan (P.), Arthur James Ballantyne (P., M.), Andrew Aitken Barclay (P., M.), William Bennett (P.), James Symond Beveridge (P., M.), George MacLellan Blair (P., M.), John George Wilson Boleyn (P.), Andrew Clark (P., M.), Robert Crawford (P., M.), Robert Douglas, M.A. (P., M.), Kenneth M'Kenzie Duncan (P., M.), James Finlayson Fleming (P.), Robert Fullarton, M.A. (P.), Alexander Garrod (P.), Harold Smith Heap (P.), John Henderson (P., M.), William Wallace Keir (P., M.), Alexander Lawrie (P., M.), Alexander Matheson (P., M.), James Blakely Miller (P., M.), James Alexander Mitchell (P., M.), Murdoch Macdonald (P., M.), Laurence Abel Mackenzie (M.), Roderick Reid Macnicol, M.A. (P., M.), James M'Whir (P., M.), Robert Niven (P., M.), Percival Leslie Pearce (P.), Joseph Wilkie Scott (P., M.), John Shaw, M.A. (P., M.), John Laird Simpson (P., M.), John Macfarlane Sloan (P., M.), Peter Donald Strachan, M.A. (P., M.), James Douglas Carmon Swan (P., M.), Daniel Rees Thomas (P., M.), Walter Lewis Thomson (P., M.), William James Alexander Walker (M.), Robert Andrew Hanan Watson (P.), Edward Roberts Weir (P.), James Patterson Wilson (P., M.), and William Wyper (P., M.). Women—Daisy Annabelle Bennett (P., M.), Agnes Forbes Blackadder (P., M.), Jane Lorimer (M.), Eva M'Call (P., M.), Minna Amelia Macfarlane (P., M.), Annie Louise M'Elroy (P., M.), Margaret Wallace Howie M'Neil (P.), Mabel Catherine Poulter (P., M.), Agnes Renton Robson (P., M.), Marion Jamieson Ross (P., M.), and Sara Whiteford (P.).

UNIVERSITY OF ABERDEEN.—The degrees indicated have been conferred on the following gentlemen:—

Degree of M.D.—Edward Nicolls Carless, M.B., C.M., Devizes, Wilts, (under the new Ordinances); Frank Austin Gill, M.B., C.M., Rosskeen, Invergordon; *John Henry Goodliffe, M.B., C.M., Lancaster; Angus McGillivray, M.B., C.M., Dundee; William Mackie, M.A., M.B., C.M., Elgin; Leslie James Milne, M.A., M.B., C.M., Mirfield, Yorks; and Bertram Saunders, M.B., C.M., Exminster, Devonshire.

Degrees of M.B., C.M.—Forbes James Alexander, Aberdeen; John Wilhelmus Samuel Attygalle, Galle, Ceylon; Frank Hay Cantlie, Fochabers, Morayshire; William Lumsden, Aberdeen; Ronald Campbell Macfie, M.A., Old Aberdeen; James Mansie, M.A., Aberdeen; †Maurice George Robertson, M.A., Huntly, Aberdeenshire; William Alexander Salmond, Aberdeen; John George Stuart, Tarland, Aberdeenshire; George Fexil Thomson, Halifax, Nova Scotia; and Robert Valentine, Gourdon, near Montrose.

Degrees of M.B., Ch.B. (New Ordinances).—Robert Bruce, M.A., Myreton, Insch, Aberdeenshire; Alexander Ledingham, M.A., Boyndie, Banffshire; †Thomas William Lumsden, Midmar, Aberdeenshire; John Stewart Milne, M.A., King Edward, Aberdeenshire; Joseph Pozzi, M.A., Mintlaw, Aberdeenshire; and Thomas Snowball, M.A., Huntly, Aberdeenshire.

* Thesis considered worthy of commendation.
† With honourable distinction.

ANNUAL MEETING OF THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.—This meeting was held on March 27th. The executive committee were able to announce the receipt of a handsome donation of £1000 from the Baroness de Hirsch towards the formation of new branches. The report showed that the association had nineteen branches. The total number of cards was 10,619, showing a small increase on the previous year, with a corresponding increase in the members' payments, which now amounted to £4870. It was noticeable that the payments to the medical staff had increased in a greater proportion than the number of cards. In introducing the annual report the chairman, Mr. Bousfield, referred to the efforts that were being made to deal with the question of hospital out-patient departments. Some radical change could not much longer be delayed, and everything pointed to the probability that the work would be handed over to provident associations, friendly societies, and similar institutions. It was therefore of the utmost importance that the organisation of the Metropolitan Provident Medical Association should be complete when this time should arrive. An interesting experiment was made during the year. In view of the ever increasing number of applications for chest hospital letters the Hospital Saturday Fund made a special grant to the association, in return for which they undertook to sift the cases. The results of the inquiry were published in THE LANCET of March 20th, p. 820. Another matter of considerable interest to the medical profession was the endeavour to determine by means of a conference a fair rate of payments for women's provident medical clubs. Several meetings were held, but it was unfortunately found impossible to come to any definite conclusion. The chief cause in bringing about this abortive result was stated to be the want of organisation of the medical profession, in the absence of which it was impossible to reconcile conflicting interests.

PRESENTATIONS TO MEDICAL MEN.—Alderman J. B Richardson, J.P., M.D., C.M. Edin., L.R.C.P. Lond., &c., who was Mayor of Torquay during 1894–95, has been presented with his portrait in oils as a mark of appreciation of the manner in which he and Mrs. Richardson conducted the duties of Mayor and Mayoress. A bound album containing the names of 200 subscribers was given to Mrs. Richardson.—In recognition of his three contests for a seat on the Torquay Town Council Mr. E. Last Smith, J.P., L.R.C.S., L.R.C.P. Edin., was recently presented with an engraved silver salver and an illuminated address by a large number of friends.—At Bath, on March 20th, Mr. John Maurice Harper, M.R.C.S. Eng., was presented by the members of the Larkshall branch of the Rational Sick and Burial Friendly Society, of which he is the surgeon, with a handsome spirit case on the occasion of his marriage. The Mayor of Bath was to have presided at the meeting, but was prevented by illness. His worship, however, sent a kindly letter to Mr. Harper, with a handsome gold pin.—At a well attended meeting of residents in Torpoint and neighbouring parishes held on March 19th in the Mechanics' Institute, Torpoint, Mr. Charles Wm. Chubb, M.R.C.S.Eng., in recognition of his long connexion with the district, he having been in practice there for a period covering upwards of fifty years but having recently retired, was presented with a silver salver, a pair of silver candlesticks, and an illuminated address signed by all the subscribers representing the parishes of Torpoint, Antony, St. John's, and Wilcove. The salver and address were each appropriately inscribed.—On March 22nd, at Hamilton, Mr. J. Murray Young, M.B., M.S.Glasg., was presented at a social meeting of the members of the Livingstone Ambulance Class with a very handsome alabaster reading-lamp and shade in recognition of his services as instructor.—On March 16th, at St. Saviour's Infirmary, East Dulwich, Mr. H. Elwin Harris, B.A., M.B.Camb., F.R.C.S.Eng., medical superintendent, was presented by the staff of the above institution with a handsome gold watch and chain, suitably inscribed, on the occasion of his resigning his appointment. The Rev. G. Elliott, in presenting the testimonial on behalf, and in the presence of,

the whole of the staff of the infirmary, spoke in eulogistic terms of the many improvements which Dr. Harris had instituted during his five and a half years' tenure of office, laying special stress on his organisation and the method in which the nurses' training school was conducted, also the manner in which he championed the nurses' cause in the recent discussions on the Poor-law Superannuation Act.—At a public meeting held in Ferndale on March 24th Mr. S. Hamilton, B.A., M.B., B.Ch. R.U.I., was presented with an illuminated address, a marble mantel-piece clock, and a pair of bronze figures by the inhabitants as a mark of their appreciation of his services during his residence in Ferndale.—At a meeting at the Council Chambers, Municipal Buildings, Bournemouth, held on March 22nd, his Worship the Mayor presiding, Mr. Philip W. G. Nunn, L.R.C.P. Lond., M.R.C.S. Eng., was presented with a cheque for £54 odd, subscribed by friends and patients as a mark of respect and esteem on his retirement from private practice in order to devote himself exclusively to his work as medical officer of the borough.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society, held on April 2nd, Dr. Thudichum being in the chair, Dr. Gossage gave a demonstration on the Serum Diagnosis of Typhoid Fever.—Dr. Harry Campbell read a paper on the Pathology and Treatment of Emphysema. He attributed the enlargement of the chest to diminution of pulmonary elasticity and consequently to diminished suction on the interior of the chest walls, also to chronic over-action of the inspiratory muscles in consequence of dyspnœa. This caused contracture of the inspirators and fixation of the chest in the expanded position. Treatment should be directed to the preservation of pulmonary elasticity and to the strengthening of the expiratory muscles by means of special exercises so as to counteract the tendency to over-action of the inspirators.—Dr. Campbell Pope alluded to the occurrence of emphysema in muscular men with large chest capacity. Such men are frequently shallow breathers, the expansive muscles of respiration not being fully exercised. This predisposes to fixation of the rib-joints and ossification of the cartilages, the result being a large chest with little mobility, so that after an attack of bronchitis the less supported portion of the lungs—viz., the apices and margins—become emphysematous.—Dr. Thudichum dwelt on the importance of coughing as a cause of emphysema.

BEDFORD MEDICAL SOCIETY.—A meeting of this society was held on March 25th, Mr. Kinsey, the President, being in the chair.—The President gave an address on Medical Defence.—Dr. Goldsmith read notes of a severe case of Tetanus treated with antitoxin and morphia injections. The patient, a lad aged sixteen years, was first seen on Dec. 28th, 1896, with symptoms of tetanus. Two months previously he had cut a finger with a butcher's knife, and two weeks previously he had fallen on gravel and grazed his wrist, the latter probably being the origin of infection. On Dec. 29th 30 c.c. of Pasteur's fluid antitoxin serum, obtained from Messrs. Burroughs, Wellcome, and Co. were injected. On Dec. 30th 30 gr. of the solid serum, obtained from the British Institute of Preventive Medicine, were injected, and this was repeated the same evening and again on Dec. 31st. On Jan. 1st and 2nd 10 c.c. of the fluid serum (obtained from Messrs. Burroughs, Wellcome, and Co.) were given. He progressively got weaker and more emaciated until Jan. 6th, after which he gradually improved. Frequent injections of morphia were given from the commencement of the attack until the 17th, when the spasms had ceased and the patient was practically convalescent. Dr. Goldsmith was of opinion that the antitoxin had very little to do with the result, and that the injections of morphia were of the greatest benefit in checking the paroxysms.—Dr. Willmer Phillips read notes of a fatal case of Meningitis following an attack of Influenza and Pneumonia in a child aged two years, death occurring on the seventh day from commencement of influenza.—Mr. Nash read a paper on Inflammation of the Accessory Sinuses of the Nose and Ear, with special reference to several cases treated by free drainage.—The following specimens were shown: Adeno-carcinoma of the Rectum by the President; Tibia from a case of Acute Idiopathic Osteo-myelitis, which proved fatal in five days, by Dr. Ross; Excised Portions of the Knee-joint, Cystic Ovaries, Scirrhus of a Male Breast, a Gall-stone passed by Bowel after symptoms for three days of Intestinal Obstruction, and Skiagraphs of a Bullet in the Hand, by Mr. Nash

MEDICAL MAGISTRATES.—Dr. Reginald G. Alexander of Bradford and Dr. Robert Forsyth of Birstall, near Leeds, have been placed on the Commission of the Peace for the West Riding of the County of York.—Mr. Simeon Snell, F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S. Eng., and Mr. Alfred Wright, M.R.C.S. Eng., have been placed on the Commission of the Peace for the City of Sheffield and the County of Essex respectively.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 17th, Dr. W. B. Ransom, President, being in the chair.—Dr. Carroll read a paper on the Composition and Properties of Water, its Powers of Dissolving Gases and Minerals and thus breaking down rocks and forming soils. The causes of lead-poisoning in various places—e.g., Chesterfield rural district—were then indicated and the importance of other metals in solution shown. The law relating to water-supply was then briefly dealt with, the powers and duties of sanitary authorities under the various Acts, and the Dairies, &c., Order of 1885 being stated, and also the powers under the Rivers Pollution Prevention Act, 1876, to prevent the pollution of streams and other sources of water-supply. The substitutes for lead pipes were then reviewed. The intermittent and constant system of water-supply, the wholesomeness, the impurities, the hardness, and the purification of water were then gone into, and the importance of using bacteriological filters was shown. The softening of water by chemical means, and the enormous saving in soap, wear and tear of clothes, better cooking of food, repairs to boilers, and the use of less fuel, &c., were next alluded to, stress being laid on the facts that the harder the water the better it paid to soften it, and that the cost increased with the increase in the sulphates. By softening and subsequent filtration the water is practically sterilised. The analysis of water was next considered, the lecturer pointing out the danger of relying implicitly on a chemical analysis alone to prove the wholesomeness or otherwise of any particular water. The connexion between the use of polluted water and widespread outbreaks of enteric fever and cholera was next shown. In conclusion, the means of prevention of these diseases by destruction of the stools and other excreta by fire were advocated. It was pointed out that the present system of using disinfectants in the vessel to receive the excreta and emptying at once was simply a farce.—The President, Dr. Bolton, Mr. Littlewood, Dr. Hunter, and Dr. Mackenzie discussed the paper, and Dr. Carroll replied.

HARVEIAN SOCIETY.—A meeting of this society was held on April 1st, the President, Dr. Milson, being in the chair.—Mr. Buckston Browne read a paper on "Is it ever Impossible to Pass a Catheter through the Urethra into the Bladder?" He maintained that it was never impossible, even in the worst cases of stricture of the urethra, where the urethra had not in any part of its course actually ceased to exist, to pass an instrument. If an instrument was once passed the case could be brought to a successful issue without any perineal incision, and that being so the patient was saved all the risks of hæmorrhage and of that terrible misfortune, a perineal fistula. In the most severe cases of prostatic enlargement the urethra was simply tortuous. The difficulties were fully described and instruments were shown by which all these difficulties could be overcome. In no prostatic case was it allowed that the urethra was impassable by instruments, and therefore there was rarely any need for any form of prostatectomy or for castration. Other forms of urethral obstruction were discussed, and the question which was formulated in the title of the paper was answered emphatically in the negative.—Mr. Freyer remarked on the practical character of the paper. He was surprised to find that Mr. Browne had discarded soft for hard metal bougies in the treatment of strictures. He agreed that the knife was too frequently had recourse to in the treatment of stricture. He thought internal urethrotomy a safe and sound operation, but he believed external urethrotomy to be the only resource in other cases. He had never met with dangerous hæmorrhage in external urethrotomy, but sometimes a troublesome fistula remained. He also agreed that patient and cleanly catheterism was the best treatment for hypertrophy of the prostate.—Dr. Cock mentioned a case of intractable stricture in which he had drained the bladder above the pubes, and the patient led a comfortable life by wearing a tube and

spigot.—Mr. Browne, in reply, said it was only in strictures, miscalled impassable, that he advocated the use of hard metal bougies.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Scotch Public Health Bill.

THE Bill of the Government to amend and consolidate the laws as to public health in Scotland has been read a second time in the House of Commons, and referred for consideration to the Grand Committee on Law. A proposal was made and largely supported to make the reference to a special committee consisting of all the representatives of Scotch constituencies, with fifteen members added by the Committee of Selection, but it was resisted by the Government, and on a division rejected by the House. This Bill was introduced last session in the House of Lords, where its details were closely examined and considerably altered by a Select Committee.

HOUSE OF COMMONS.

THURSDAY, APRIL 1ST.

The Plague in Bombay.

Sir Charles Cameron asked the Secretary of State for India whether his attention had been called to the systems of anti-plague inoculation which were being tried in India by M. Haffkine and Dr. Yersin, and the statement contained in a recent official despatch from Bombay that 3296 persons had already been inoculated by M. Haffkine; and whether, with a view of securing a prompt test of the protective and curative value of the procedures referred to, he would take steps to secure an independent official registration of all anti-plague inoculations, so as to enable the practical efficacy of the systems to be tested by subsequent comparison between the disease and death-rates among inoculated and non-inoculated persons.—Lord George Hamilton replied: I have been in frequent telegraphic correspondence with the Bombay Government regarding inoculations against plague. I have requested the Bombay Government to report periodically the number and the results of inoculations under M. Haffkine's and Dr. Yersin's systems separately.

FRIDAY, APRIL 2ND.

Military Hospital at Felixstowe.

Mr. Goddard asked the Under-Secretary of State for War whether the Army Sanitary Committee had made an inspection of the site for the proposed military hospital at Felixstowe, and whether he could give any information as to the site chosen.—Mr. Brodrick replied that the site approved by the Army Sanitary Committee for the proposed military hospital at Felixstowe was about 1000 yards north-east of Landguard Fort and 165 yards from high-water mark.

Lunacy Administration in Ireland.

Mr. Shee asked the Chief Secretary to the Lord-Lieutenant of Ireland whether, in view of the friction which had arisen between many of the boards of governors of Irish lunatic asylums and the Board of Control, he would take some steps, by legislation or otherwise, to amend or re-model the constitution of the Board of Control so as to render it directly representative of the ratepayers; whether he was aware that the Lunacy Commissioners in England acted in a similar capacity to the Irish Board of Control, but nevertheless claimed no power of veto such as the latter body claimed; and whether the governors of Irish lunatic asylums were allowed any discretion as to the extent and nature of the accommodation they might provide for inmates.—Mr Gerald Balfour replied that the whole question of lunacy administration in Ireland was one requiring attention, though he could not promise that he should be able to deal with the matter in the immediate future. He was not sufficiently acquainted with lunacy administration in England to answer the second paragraph of the question. As regards the third paragraph, the fullest opportunity was uniformly afforded to local authorities to submit their views on any plans proposed for improved or increased accommodation, and these views received the most careful consideration of the Board of Control, with the utmost desire to adopt them so far as they might be found practicable.

Venereal Disease in the Army.

On the motion of Major Rasch a return was ordered of the amount of all classes of venereal disease (including simple venereal returns) for all stations where the Contagious Diseases Act was in force from 1864 to 1883, and a similar return for the same stations from 1886 to 1895.

MONDAY, APRIL 5TH.

Invalided Recruits.

Colonel Wyndham Murray asked the Under-Secretary of State for War whether his attention had been drawn to the fact, as shown in the Annual Report of Recruiting, that although the number of men under two years' service in the army was less last year than in any of the previous four years, yet the number of men under that length of service who were discharged as invalids was greater than in any of those years, and whether he could explain the reason for this increase of invalid recruits; and, with reference to the same report, whether he could state the reason why the numbers of militiamen who joined the regular forces had constantly diminished during the last five years, and whether the question of the reduction of the bounty given on completion of preliminary drill had been considered in connexion with this decrease.—Mr. Brodrick replied that there was a small increase in the invaliding of men under two years' service. It was probably attributable to the increased attention paid to physical training, by which men who were unable to bear the strain were more rapidly and surely found out. The diminution in the numbers of militiamen who had joined the regular forces might to some little extent be due to the reduction in the rate of bounty payable on completing their drill on enlistment. If it should continue to increase the question would be considered.

Irish Poor-law Relief Bill.

Mr. Gerald Balfour, in reply to Mr. McCartan, said it was not intended to appoint a committee to make inquiry into the working of the Poor-law system in Ireland in connexion with the Poor law Relief Bill shortly to be introduced. It was hoped that the effect of the Bill would be to remove some of the difficulties standing in the way of classification and of other reforms.

TUESDAY, APRIL 6TH.

Health Lectures for Young Soldiers.

Colonel Wyndham Murray asked the Under Secretary of State for War whether he would consider the advisability of carrying out the recommendation of the Committee of the Royal College of Physicians contained in their report forwarded to the Secretary of State for India on March 29th, that medical officers of the army should give elementary reading-room lectures on the preservation of health to young soldiers; and whether these lectures could especially be given before or during their voyage to India.—Mr. Brodrick replied that the recommendation that medical officers of the army should give lectures to young soldiers on the preservation of their health was one to which great importance was attached, and the question of the time and manner in which such advice could be given was under consideration.

The London Water Question.

Mr. Sydney Buxton asked the President of the Local Government Board, with regard to that portion of the instructions to the Royal Commission on the London Water Companies which instructed them to inquire and report whether the financial considerations of the question rendered it desirable that the undertaking of the water companies should be acquired by a public authority or authorities, if he would state on what basis of purchase the Commissioners would be able to form an estimate of a fair price, whether it would be on the basis of proceedings under the Lands Clauses Act, under the so-called "Plunket" Clause, or under some other form of arbitration.—Mr. Chaplin said it appeared to him that it would be for the Commissioners to form such estimates as they might consider necessary for that purpose and to adopt such method or methods as they might deem desirable. They could, if they thought fit, form alternative estimates on different bases, but this was a question for them to decide.

WEDNESDAY, APRIL 7TH.

Local Officers Superannuation Bill.

Mr. Leuty asked the President of the Local Government Board whether he had taken any steps to ascertain the feeling of the local authorities of England and Wales as to the provisions of the Local Officers Superannuation Bill; and, if he had, would he inform the House with what result.—Mr. Chaplin replied that the Local Government Board had not taken any steps to ascertain the views of the local authorities in England and Wales as to the provisions of this Bill. There were many thousands of such authorities, and the Board had not seen any reason for adopting the unusual course of asking the authorities for their views as to the measure.

Institutions for Idiots and Imbeciles.

On the motion of Mr. Tomlinson a Bill was introduced and read a first time to exempt from poor and other local rates all registered institutions for the care, training, and education of idiots and imbeciles.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AITKEN, J., M.B., C.M. Glasg., has been appointed Medical Officer by the Lancaster Board of Guardians.

BARTLETT, B. P., M.R.C.S., has been appointed Medical Officer for the Bourton Sanitary District of the Shaftesbury Union.

BATELY, JOHN, M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Belton Sanitary District of the Mutford and Lothingland Union.

BAYNES, Mr., has been re-appointed Public Analyst for the Borough of Hull.

BULLMORE, W. K., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Falmouth and Truro Port Sanitary Authority.

CALEY, H. A., M.C. Lond., M.R.C.P., has been appointed Lecturer on Materia Medica and Therapeutics in St. Mary's Hospital Medical School, vice Sidney Phillips, resigned.

COLLINGRIDGE, WM., M.D. Cantab., D.P.H., has been re-appointed Medical Officer of Health by the Port Sanitary Committee of the London Corporation.

CORSER, F. R. S., M.B., C.M. Edin., has been re-appointed Medical Officer for the Bourton-on-the-Water sub-Sanitary District.

CREERAR, CHAS., M.B., Ch. M. Edin., has been appointed Medical Officer for the Holme Abbey Sanitary District of Wigton Union.

DANIEL, R. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Chatteris Urban District Council.

DAVIDSON L. GORDON, M.B., Ch.M. Syd., has been re-appointed a Medical Officer to the Balmain Cottage Hospital, Sydney, New South Wales.

DUCAT, A. D., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for Chiswick, Middlesex.

DUNDAS, M. G., M.R.C.S., has been re-appointed Medical Officer for the Fanshaw Sanitary District by the Mitford and Launditch Rural District Council.

FAUSSET, H. J., M.D., M.Ch. Dubl., has been re-appointed Medical Officer of Health for the Tamworth Urban and Rural Sanitary Districts.

FISHER, F. C., F.R.C.S. Eng., has been re-appointed Medical Officer for the Abbott's Langley Sanitary District of the Watford Union.

GRAHAM, J. B., M.D., Ch.M. Irel., has been re-appointed an Honorary Medical Officer to the Balmain Cottage Hospital, Sydney, New South Wales.

HARRIS, D., M.B., C.M. Glasg., has been appointed Medical Officer and Public Vaccinator for the First Sanitary District and Workhouse of the Carmarthen Union, vice W. L. Hughes.

HOGARTH, A. L., M.B., C.M. Glasg., has been re-appointed a District Medical Officer by the Cheltenham Board of Guardians.

JAFFREY, FRANCIS, F.R.C.S. Eng., has been appointed Surgical Registrar to St. George's Hospital, London.

JONES, EDWARD, M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health for Dolgelly.

KELLY, P. J., M.B., Ch.H. Syd., has been re-appointed an Honorary Medical Officer to the Balmain Cottage Hospital, Sydney, New South Wales.

LIMRICK, W. S., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer by the Waterloo (Liverpool) District Council.

LYSTER, A. E., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Chelmsford Union, vice W. Hart.

MELSON, G. H., M.D. Lond., M.R.C.S., has been re-appointed an Honorary Physician to the Moseley Hall Convalescent Home for Children.

MILLER, J. T. R., L.R.C.P. Irel., has been re-appointed Medical Officer for the Leavening Sanitary District of the Malton Union.

MURPHY, D. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg. has been appointed Officer for the Youghal Workhouse, Cork.

NICHOLS, H. G., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Medical Officer to the Moseley Hall Convalescent Home for Children.

OWEN, ARTHUR DUNLEY, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer to the Mashonaland Mission Hospital, Fort Salisbury, Mashonaland, South Africa.

PALMER, A. M., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer by the Whittington Urban District Council.

PARKER, J. E., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer for the Ince-in-Makerfield Sanitary District of the Wigan Union.

PEARCE, A., M.R.C.S., has been re-appointed Medical Officer by the Kingsbridge and Salcombe Port Sanitary Authority.

PRIESTLEY, THOMAS, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Royal Hospital, Sheffield.

REYNOLDS, J. H., M.B., C.M. Edin., has been appointed Special Non-Resident Clinical Clerk to the Lock Wards, Royal Infirmary, Edinburgh.

RIDING, EDWIN, M.R.C.S., has been re-appointed Medical Officer of Health by the Rural District Council, Repton.

SMALLWOOD, R. P., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Eighth Sanitary District of the Chelmsford Union, vice E. P. Cockey.

SMITH, K. R., M.D. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Totnes.

TEMPLE, GEO. H., M.B., C.M. Edin., has been appointed Medical Officer for the Weston Super-Mare Sanitary District of the Axbridge Union.

TOTHILL, F. C., M.B., C.M. Edin., has been appointed Medical Officer for the Asnford Sanitary District of the Staines Union.

TUKE, G. M., M.R.C.S., has been re-appointed Medical Officer of Health by the Hollingbourne Rural District Council.

UNDERHILL, F. W., F.R.C.S. Edin., M.R.C.S., has been re-appointed an Honorary Medical Officer to the Moseley Hall Convalescent Home for Children.

WILSON, J., M.D., C.M. Edin., has been re-appointed a District Medical Officer by the Cheltenham Board of Guardians.

YOUNG, MEREDITH, M.B., C.M. Edin., D.P.H. Vict., has been appointed Medical Officer of Health for the Borough of Crewe.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF BRIGHOUSE.—Medical Officer of Health for the Borough. Salary £200 per annum. Applications to the Town Clerk, Town Clerk's Office, Brighouse.

BRENTFORD UNION.—Dispenser for the Infirmary Workhouse and Schools at Isleworth. Salary £100 per annum, with dinner and tea daily.—Applications to the Clerk, Union Offices, Isleworth, Middlesex.

BRITISH LYING-IN HOSPITAL, Endell-street, Long-acre, W.C.—Administrator of Anæsthetics.

BURY DISPENSARY HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, residence, and attendance.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—House Surgeon, unmarried. Salary £90 per annum, with board, lodging, and washing.

COMBINED DISTRICT OF BATTLE, CUCKFIELD, EASTBOURNE, &c.—Medical Officer of Health, for three years. Salary £600 per annum, to include all travelling and other expenses. Applications to the Secretary, Haywards Heath.

DUNDEE ROYAL INFIRMARY.—Second Honorary Assistant Physician.

GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Salary £100 per annum, with board, residence, and washing.

GERMAN HOSPITAL, Dalston, N.E.—Honorary Ophthalmic Surgeon.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in hospital provided.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR WOMEN AND CHILDREN, Leeds.—House Surgeon for twelve months. Salary £90 per annum.

LIVERPOOL NORTHERN HOSPITAL.—Honorary Physician.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £80, to be increased to £90 per annum after the first year's service, with apartments, board, and attendance. Applications to the Secretary, 34, Moorfields, Liverpool.

NEW SOUTH WALES.—Bacteriologist and Assistant to the President of the Board of Health of the Colony. Salary £600 per annum. Applications to Agent-General for New South Wales, 9, Victoria-street, London, S.W.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer, for six months. A salary at the rate of £50 per annum for the senior post.

NOTTINGHAM GENERAL DISPENSARY.—Junior Assistant Resident Surgeon, for six months. Salary at the rate of £120 per annum, with rooms and attendance.

PARISH OF ROUSAY AND EGILSHAY, Orkney.—Medical Officer. Salary £51 sterling per annum. Applications to the Clerk of Parish Council, Rousay, Orkney.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Examiners.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), Greenwich, S.E.—House Physician. Salary £75 per annum, with board and residence.

ST. SAVIOUR'S UNION, Surrey.—Medical Superintendent at the Infirmary, East Dulwich-grove, S.E. Salary at the rate of £400 per annum, with unfurnished house, coals, gas, and water. An annual percentage deduction from the salary and emoluments will be made according to the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk, Union Offices, John-street West, Blackfriars-road, S.E.

SHEFFIELD GENERAL INFIRMARY.—Junior Assistant House Surgeon, for three years. Salary £50 per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL, TAUNTON.—Assistant House Surgeon for six months. Board, washing, and lodging in the institution provided.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Stipend £125 per annum.

WESTMINSTER GENERAL INFIRMARY, Gerrard-street, Soho, W.—Resident Medical Officer, for one year.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for six months. Salary at the rate of £70 per annum, with rooms, board, and washing.

WONFORD HOUSE HOSPITAL FOR THE INSANE, near Exeter.—Assistant Medical Officer. Salary £150 per annum, with furnished apartments, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

EMMETT.—On April 2nd, at Woodville, Kingston-road, Portsmouth, the wife of Richard Emmett, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MCKENZIE.—On March 12th, at Glenlyon, Berea, Durban, Natal, the wife of Dr. Archibald McKenzie, of a daughter.

THOMSON.—On April 1st, at Elleray, The Avenue, Ealing, W., the wife of George Thomson, M.B., of a daughter.

MARRIAGES.

BERNHARDT—FLACK.—On April 3rd, at Christ Church, Brondesbury, Dudley Richard Bernhardt, M.R.C.S., L.R.C.P., L.S.A., of Hamilton-terrace, W., to Beatrice Mary Flack, of South Mansions, Streatley-road, Brondesbury, fourth daughter of the late Horace Flack.

EYRE—LEWIS.—On March 31st, at the Parish Church, Folkestone, Surgeon-Lieut.-Colonel Montague Stokes Eyre, I.M.S., second son of the late Surgeon-General Eyre, to Emily Frances, eldest daughter of Henry Lewis, M.D., Folkestone.

DEATHS.

GARDNER.—On April 1st, at Naples, William Gardner, M.D. Glasg., of Melbourne, Victoria.

REILLY.—On March 30th, in London, Edwin James Reilly, M.R.C.S., L.R.C.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 8th, 1897.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb	Wet Bulb.	Solar Radia. in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April	2	29·63	N.E.	40	38	86	48	36	...	Cloudy
"	3	29·54	E.	41	40	70	47	38	...	Cloudy
"	4	29·45	N.E.	46	41	88	50	41	...	Cloudy
"	5	30·03	E.	38	36	74	47	34	...	Cloudy
"	6	29·72	S.E.	42	38	87	51	38	0·25	Cloudy
"	7	29·58	S.E.	41	39	82	53	39	0·14	Cloudy
"	8	29·99	N.E.	43	41	85	50	41	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (14th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (15th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (17th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (12th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. R. Harrison (President): Case of Extrophy of the Bladder with Epispadias, treated by Left Nephrectomy and Right Ureteral Transplantation.—Mr. Turner (for Dr. Rolleston): (1) Case of Spastic Hemiplegia after Whooping Cough; (2) Case of Acromegaly.—Mr Battle: (1) Result of Operation for Excessive Deformity of Lower Extremities; (2) Amputation of Thumb for Large Sarcomatous Growth in a Man the subject of Multiple Bony Growths; (3) Dislocation of Head of Radius from Ulna due to Rupture of Orbicular Ligament; (4) Early Condition of Baker's Cyst of Knee.—Dr. L. Guthrie: Multiple Spontaneous Fractures in an Infant.—Mr. Turner: Case of Lymphangioma.

TUESDAY (13th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Mr. R. L. Knaggs: Compound Depressed Fracture of the Skull, Cerebral Abscess, Hernia Cerebri, Recovery, with a consideration of the subject of Hernia Cerebri based upon 109 collected cases.—Dr. J. W. Carr: Non-Tubercular Posterior Basic Meningitis in Infants.

WEDNESDAY (14th).—HUNTERIAN SOCIETY.—Clinical Evening. Cases will be shown by Mr. H. Grant, Mr. J. H. Sequeira, Mr. T. H. Openshaw, Mr. H. V. Hickman, Dr. Woods, and Dr. F. J. Smith.

SOUTH-WEST LONDON MEDICAL SOCIETY (Stanley's, 235, Lavender-hill).—8.30 P.M. Paper:—Dr. C. Smith: Etiology of Diphtheria, with special reference to two localised outbreaks in Wandsworth. Dr. Sims Woodhead will give a Limelight and Microscopic Demonstration of the Diphtheria Bacilli.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr Pegler, Dr. H. L. Lack, Mr. de Santi, Dr. A. Bronner, Dr. F. de H. Hall, Dr. F. Potter, Dr. S. Spicer, Dr. W. Hill, and Dr. Bennett.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (12th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Dr. G. Reid: Sanitary Appliances.

WEDNESDAY (14th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Mr. O. Fleming (conducted by): Inspection and Demonstration of Artisans' Dwellings, Boundary Street Area, Bethnal Green.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"SAFE LAMPS."

THE Moonlight Patent Lamp Company, Limited, of 126, Paddington Liverpool, have submitted to us for inspection a model of their night lamp. The essential principle of this lamp is that the reservoir never contains an excess of oil; that is, instead of filling the reservoir with oil in the usual way it is only necessary to saturate the absorbent with which it is charged. There is therefore no room for explosion in the reservoir, the space being occupied by the absorbent. The lamp is well adapted for burning benzoline, the cost of its employment as a nightlight being, it is stated, only a penny a night. A decided advantage is that the wick does not char and consequently very seldom requires adjusting. It gives a clear, white, steady flame which is entirely without smell. The same principle is applied to cycle lamps, carriage lamps, &c., all of which give an excellent degree of illuminating power.

MR. J. H. LAPTHORN, of 361A, Oxford-street, Manchester, sends us two lamps which provide against the ordinary disadvantages of the reservoir being constructed of glass on the one hand and of metal on the other. The main objection to glass is that it is fragile and liable to crack with alternations of temperature, but one advantage it presents is that the amount of oil in the reservoir may be seen. The disadvantage he proposes to overcome by placing the reservoir in a strong basket of wire after the manner of a "seltzogene," while the disadvantage of a metal reservoir—that is, its opacity—he proposes to remedy by placing a small ballcock in the reservoir, which would show by means of an indicator outside the quantity of oil contained in the reservoir. Neither device appeals to us as offering any satisfactory solution of the problem of lamp construction; we have seen much simpler designs which are more reliable and more convenient.

MR. W. MACADAM, of 7, Latchmere-street, Battersea-park-road, has submitted to us a drawing of a safety lamp which he proposes to construct. It contains a wick tube running to the base of the reservior and terminating in a small box containing a spherical plug. When the lamp is in an upright position the oil is free to flow through the wick tube, but should the lamp be upset in any direction the spherical plug blocks the wick tube and prevents the escape of oil. This method may be applied to the duplex lamp also. In addition, it is practically impossible for an explosion to take place since the air space is quite cut off from communication with the flame. The design is simple and we should say fulfils the requirements of a lamp that can correctly be called safe.

Dr. S.—If our correspondent can prove what he says he would have grounds for demanding an explanation and probably would be well advised in seeking one. But he must not rely too much on the accuracy of the patients.

DR. CALMETTE'S ANTI-VENOMOUS SERUM.

DR. HAZARD, of the French Colonial Service, reports (*Archives de Médecine Navale et Coloniale*, March, 1897) a case of recovery from snake bite after injection of Dr. Calmette's anti-venomous serum. In December last at Martinique a soldier, aged twenty-three years, was bitten in the left thumb by a vigorous trigonocephalus (Bothrops Lanceolatus), nearly five feet in length. When the accident occurred the man was in a squatting position, but although he instantly jumped to his feet the action failed to dislodge the reptile, which remained for some moments firmly fixed to his digit, and it was not until he struck it on the head with his fist that it relaxed its grip and fell to the ground. There were two punctured wounds about half an inch apart, one of which was bleeding slightly. With a penknife the soldier enlarged it superficially, and he sucked the place three or four times. An officer then bound a ligature tightly round the root of the thumb, and dispatched the man to the hospital, where he arrived breathless from running some ten or twelve minutes after receiving the bite. To save time he was attended to in the office. Ten cubic centimetres of anti-venomous serum (which had been received from Lille in the course of the preceding month) were subcutaneously injected into the patient's left flank. The seat of injury was washed with hypochlorite of lime, and five cubic centimetres of the latter solution having been injected into and around the punctures the constricting ligature was removed. Soon afterwards the principal medical officer arrived at the hospital, and the case being in his opinion very grave he ordered a second injection of 10 cubic centimetres of serum, as well as a second local injection of 4 cubic centimetres of the hypochlorite. The patient was then put to bed under several blankets and given strong coffee to drink at frequent intervals. For forty-eight hours he complained of darting pains in his arm, loss of appetite, and sleeplessness—the last symptoms being no doubt due to the coffee—but with these exceptions the indications were entirely favourable. There was no local tumefaction, and the axillary glands remained unenlarged. On the fifth day the man had perfectly recovered and was discharged to duty. Immediately after he was bitten he says his forearm became heavy and numb, as though it were asleep, and neither the incision he made himself nor the hypochlorite injections caused him the least pain. This anæsthesia only lasted a few hours, the sense of feeling being fully restored by the next morning.

Viator.—The right course to be taken is to approach the local sanitary authority. When this has been done, and to no purpose, we might try to be of use, but the properly appointed officer must first be found wanting.

QUACKS AND THEIR WAYS.

To the Editors of THE LANCET.

SIRS,—I beg to enclose a letter which was sent to a patient of mine, whose name I will ask you to suppress. The patient is an advanced general paralytic. I am, Sirs, yours faithfully,

Brackley House, Newmarket, April 6th, 1897. JOHN H. MAUND.

[ENCLOSURE.]

March 30th, 1897, 54, Watkinson-street, Liverpool.

Mr.——I wrote to you yesterday, but I understand that the doctors will not allow you to try my cure. If you will send for me to come to you I will certainly give you such relief that will result in a return to perfect health. I await your reply. TIMOTHY NARY.

Mr. J. T. Clare (Straits Settlements).—The communication has been forwarded to the patentees of the apparatus mentioned.

M.D. (Chiswick) would like to hear of an institute or home where a girl aged eight years, could be received. She is now in a Poor-law infirmary, but the board of guardians would pay from 7*s.* to 10*s.* per week for her maintenance. She suffers from a mild form of idiocy and has a slight epileptic fit about once a month; occasionally she has a more severe fit. She frequently has incontinence of urine at night. Her general health is good.

THE PROPOSED NATIONAL PROVINCIAL CRIPPLES AID UNION.

MR. GILLINGHAM of Chard, whose scheme we noticed in THE LANCET of Feb. 13th, sends us a long letter on the same subject. He draws attention to the fact that though the London aid societies are doing good work in aiding cripples, still this presses very hardly on provincia mechanicians, who are in many cases quite equal to making the necessary appliances. But as the London societies are under contract to metropolitan firms these latter always get the orders. We are afraid that this is not the only instance where the provinces are deprived of their due by the octopus of London. The same holds good as regards metropolitan hospitals, and we quite agree with Mr Gillingham's argument that if the proposed union were arranged it would not only be a benefit to many cripples by bringing aid to their doors, but would also bring about an increase of trade to provincial mechanicians.

A RELATION OF EDWARD JENNER.

A CORRESPONDENT has called our attention to the fact, with reference to the Jenner Memorial Celebration, that a relation of Edward Jenner—a second cousin—is still living in the person of the Rev. Edward Henry Lane Nootт, vicar of St. John's, Dudley, and now in his eighty-first year. Mr. Nootт's mother, whose maiden name was Miss Mary Higgon, was a first cousin to Dr. Edward Jenner and was vaccinated by him personally.

Enquirer is placed in a somewhat awkward position by the case he describes. There is no greater kindness in the heads of houses than to act with consideration to their servants when they fall sick, especially with a grave and infectious disease like scarlet fever, as in this case. But the kindness to be complete must extend till all desquamation is over. Here—naturally, no doubt—the lady has become impatient. It is certainly desirable that where a case of scarlet fever arises there it should remain, saving always removal to an isolation hospital provided in the district for such cases. Is there any reason why the lady and family should not return to her house? We assume that the patient and nurse have been kept to one or two rooms. As to removal to a distance of six miles, this can be done, no doubt, and with due precautions need not involve any violation of the Public Health Acts; but the course is very objectionable. Without a proper ambulance and trained persons to carry out the removal there will be a great probability of carrying infection to a new district, and such action might involve the good relations of the patient's father with his employer. We scarcely think that any action would lie on the ground of such removal, if due care against exposure of the patient or his clothes is observed and the carriage in which he is conveyed is thoroughly disinfected. The objecting parties have no legal power to prevent the boy going to his own home; but it is highly desirable that the case should remain where it is till all trace of desquamation is over. If this cannot be, some amicable arrangement must be sought for by which the shepherd may be kept apart from the desquamating patient till all risk is over.

THE ENTERPRISE OF AN L.O.S.

To the Editors of THE LANCET.

SIRS,—Thinking the enclosed might be interesting to the profession as indicating what we may expect in the near future, I have cut it from the advertisement columns of one of our local papers.

I remain, Sirs, yours truly,

EDWARD LYNN, M.R.C.S. Eng., L.S.A. Lond.

New Charlton, April 5th, 1897.

[ENCLOSURE.]

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.
MRS. HOBBS, L.O.S.,

Trained at, and afterwards on the Staff of, Queen Charlotte's Hospital, may be consulted at 81, Lee High-road, Lewisham, either personally or by letter. A full stock of Drugs, Chemicals, and Herbs kept constantly on hand.

Diplomas, Certificates, and Testimonials may be seen on application.

—*Kentish Mercury*, April 2nd, 1897.

F. V.—There is no book that we know of dealing with French watering places exactly as our correspondent requires. The most suitable for his purpose would be one of the "Guides Joanne" which deals with the Normandy coast, to be procured from Hachette et Cie. or through any bookseller. Etretat, Trouville, St. Addresse, Berck-sur-Mer, and Wimereux are all well-known places on the north coast, and further south there are Biarritz and St. Jean de Luz, as well as the Riviera resorts, which it is unnecessary to particularise. The sanitation of Boulogne has improved immensely of late years. It has a main drainage system, with which all houses are obliged to be connected, and a good water-supply. A correspondent who has exceptional sources of information says that during four whole years and three summers of three other years he saw only one case of diphtheria and three of typhoid fever there, one of the latter being imported.

A READY RETORT.

OUR contemporary the *Guyoscope*, whose April issue has the same meritorious quality of lively good humour that marked its former numbers, is responsible for the following:—

> A gentleman, not unknown to fame, had left his corner seat in the already crowded carriage to go in search of buns and milk, or cake and sherry, leaving a rug to reserve his seat. On returning he found that, in spite of the rug and protests of his fellow-passengers, the seat had been usurped by one in lady's garments. To his protestations her lofty reply was: "Do you know, sir, that I am one of the director's wives!" "Madam," he replied, "were you the director's only wife, I should still protest."

THE Worshipful Company of Skinners have sent a donation of ten guineas to the Royal Hospital for Diseases of the Chest, City-road.

CHICAGO VITAL STATISTICS.

THE report of the Bureau of Vital Statistics of Chicago for February, 1897, contains a large number of interesting details of the disease and mortality of that wonderful city, with its population of 1,619,226. But what seems a new feature in it is a circular for distribution, either generally or among families affected with infectious complaints. The circular, we are told, has been written at the request of physicians who have not time to write in sufficient detail and with necessary precision instructions for the restriction and destruction of contagion. The idea is a good one, and might be more extensively adopted among ourselves with advantage. We cannot refrain from giving the following particulars of antitoxin diphtheria treatment, verified by the name of Dr. E. P. Murdoch, chief of the antitoxin staff:—

No. of cases visited	152
,, bacterially verified as true diphtheria ...	81
,, treated with antitoxin	81
,, recovered	72
,, died	5
,, remaining under treatment	4
,, treated with immunising doses	40
,, treated with immunising doses subsequently attacked with diphtheria	0
,, intubated	8
,, intubated which recovered	7

Exclusive of 4 cases remaining under treatment at the end of the month, the mortality rate was 6·4 per cent. of bacterially verified diphtheria—72 recoveries, 5 deaths. Out of a total of 1772 deaths, 31 were caused by puerperal septicæmia.

Delta.—There is nothing unprofessional in informing patients of an intended change of address, but our correspondent must be very careful only to inform *his* patients. No circulars should be sent broad-cast to the public, and advertisements in local papers are inadvisable.

"MATERNAL IMPRESSION ON THE FŒTUS."

To the Editors of THE LANCET.

SIRS,—Many medical men believe in maternal impressions on the fœtus, and personally I do, from nearly twenty-nine years of midwifery practice in which I have seen some remarkable cases. Puppies brought up under the influence of red light are said to grow up irritable and pugnacious, and those exposed to a green or blue light to turn out good-tempered. Carry out the same surroundings with a bitch or any other animal during the whole time, or at all events the early part, of pregnancy, and carefully test the results in a number of the young animals for a year or two succeeding birth. Other experiments of a somewhat different nature could then be tried, and if the conclusions arrived at pointed to a distinct effect being produced on the fœtus through the mother's perception it would go a good way to prove that a branch of science in relation to the human mother has not received the attention which is due to it.

I am, Sirs, yours faithfully,

March 29th, 1897. ANOTHER M.R.C.S., L.S.A.

Mr. C. E. Abbott.—In our opinion the responsibility devolved on B., as the infant had developed an entirely new complaint since A. had seen him last.

Dr. A. P. de Andrade does not appear to us to make out a very good case for the proposed innovation.

THE PROVINCE OF THE OPTICIAN.

WE have received from Mr. Frank Howard a second communication concerning our notice of his circular, which he says amounts to a libel. We confess our inability to see the matter in the same light. Mr. Frank Howard is not an ophthalmic surgeon, and in making an offer to the profession to diagnose surgical cases and to recommend appropriate treatment he seems to us to have exceeded his province. Mr. Howard sees in our treatment of his communication last week an aggravation of our offending and a proof of malice, but there he does us no justice. If he will glance at our columns he will see (1) that a discussion on any subject in THE LANCET is *always* continued under its original heading, and (2) that the type used for the headings to editorial paragraphs is *always* smaller than that used for the headings to letters from correspondents. This is our invariable rule, which we break on this occasion. The following letter requires an explanation from Mr. Howard to be given to all the medical men who have received his circular:—

To the Editors of THE LANCET.

SIRS,—I am directed by the Committee of the Central London Ophthalmic Hospital to state, in reference to some correspondence under the heading "An Insolent Advertisement," that the only opticians officially recognised by this institution are the firm of Messrs. Curry and Paxton. I am, Sirs, yours faithfully,

Central London Ophthalmic Hospital, J. G. BRYANT,
Gray's-inn-road, W.C., April 6th, 1897. Secretary.

RADIOGRAPHIC DERMATITIS.

To the Editors of THE LANCET.

SIRS,—I am much interested in your annotation on "Radiographic Dermatitis with Ostitis." I have been working on the x rays for over twelve months; during that time my hands and arms must have been exposed to the rays for many hours, sometimes for several hours at a time, when making experiments with new tubes and apparatus. I will premise that I have an exceedingly sensitive skin, so much so that when I spend a week under canvas with the Volunteers I invariably have severe erysipelatous inflammation of the skin of the face and have often been almost blind for two or three days. My hands, also, will blister directly if exposed to the direct rays of the sun for any length of time. In spite of this I have never noticed the faintest trace of any inflammation or bronzing due to the x rays, nor have I ever seen any signs of irritation of the skin in any of my patients. I have had many prolonged exposures of children with delicate skins, frequently with the skin entirely unprotected by clothing, &c.

In view of your suggestion as to the *luminous* rays, it will interest you to know that I perform all my experiments with the entire apparatus enclosed in a large, light-tight box with cardboard doors, so that no luminous rays can penetrate. Is it not also possible that the signs of ostitis in Mr. Gilchrist's case may be due to the puffy inflammation of the skin? I have frequently noticed that on examination of, say, a hand when the soft tissues are inflamed, as in cellulitis, one finds an apparent thickening of the bone, really due to the swollen soft tissues preventing close contact of the bone with the sensitive plate. Even a fraction of an inch will give an apparent enlargement. The loss of detail in the bone would also be due to the same cause. I find I have to be constantly on my guard to avoid these skiagraphic fallacies.

I am, Sirs, yours faithfully,

Northwich, March 30th, 1897. ALF. H. MARSH, L.S.A.

L. D. T.—Our correspondent is quite right with regard to the insanitary nature of both methods of procedure. But he is wrong in thinking that they pass unnoticed, for much has been done in the past and continues to be done in the present to put a stop to them.

H. R.—"A Guide to the Examination of the Urine," by J. Wickham Legg, M.D., F.R.C.P. Lond. (London: H. K. Lewis), price 3*s.* 6*d.*; and "Notes on Examination of Blood and Excreta," by Sidney Coupland, M.D., F.R.C.P. Lond. (H. K. Lewis), price 1*s.* 6*d.*

H. B.—We cannot vouch for the facts, but some years ago it was commonly reported that a corpse was preserved on the top of a house in the West-end of London. It was said to be embalmed and placed in a glass coffin.

Paine.—A death from hydrophobia was recorded in THE LANCET of July 25th, 1896, p. 256. It occurred at Radcliffe about ten days previously. The victim had been bitten by a mad dog in the preceding November.

M.R.C.S.—Nothing has yet been decided about reproductions, but there is to be a meeting of the committee of subscribers on Friday, the 9th, when the matter will be discussed.

An Old Subscriber is requested to supplement his information from the Central Criminal Court by giving us his name and address—of course, in strict confidence.

ERRATUM.—In our notice in THE LANCET of April 3rd, p. 965, of Mack's Austrian Pine Products, the word "soluble" should have been inserted before the word "essence" in the sixth line, and instead of "colourless oil" in the succeeding line it should read "colourless *liquid*." The essential oil itself boils at between 330° and 350° F.

During the week marked copies of the following newspapers have been received:—*Bath Herald, Daily Mail, Hull News, Folkestone Express, Evesham Journal, Derbyshire Times, Bury Free Press, South Durham Mercury, Bournemouth Directory, Times of India, Bedfordshire Independent, Pioneer Mail, Leicester Post, Bradford Observer, Manchester Courier, Newcastle Journal, Builder, Dundee Courier, East Anglian Weekly Times, South Wales Daily News, Architect, Liverpool Daily Post, Scotsman, Citizen, Norwich Mercury, Grantham Journal, Hastings Observer, Yorkshire Post, Hereford Times, Bristol Mercury, Sussex Daily News, Portsmouth Times, Leeds Mercury, Wolverhampton Chronicle, Midland Counties Express, Worcester Echo, Sheffield Telegraph, West Kent Advertiser, Bexhill-on-Sea Observer, Chatham News, South-Eastern Gazette, Somerset Herald, Andover Advertiser, Surrey Comet, Acton Gazette, North British Daily Mail, Worcestershire Chronicle, Sketch, City Press, Birmingham Post, Sanitary Record, Cayuga County Independent, Auburn, N.Y., Reading Mercury, Crewe Chronicle, Mining Journal, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hertfordshire Mercury, Shetland News, Surrey Advertiser, Local Government Journal, Public Health, Devizes Gazette, Aldershot News, Wigan Observer, Poole Herald, Wrexham Argus, Witney Gazette, West Middlesex Herald, South Western Gazette, National Press Journal, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Messrs. R. Anderson and Co., Lond.; A. Z., Lond.; A. F., Lond.; Messrs. Armour and Co., Lond.; American Climatological Association, Washington, Sec. of; Acme Insurance Co, Lond., Manager of; Actiengesellschaft Bad, Neuenahr, Director of; Messrs. Arnold and Co., Lond.; Messrs. Armbrecht, Nelson and Co., Lond.; Anderson's College Medical School, Glasg., Sec. of.

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